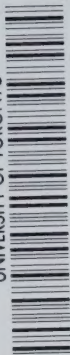


FACULTY OF DENTISTRY LIBRARY
UNIVERSITY OF TORONTO



3 1761 03924647 5



Digitized by the Internet Archive
in 2025 with funding from
University of Toronto

<https://archive.org/details/31761039246475>

DENTAL JOURNAL DENTAIRE

Si non livrable
au destinataire
**RETOURNER A
L'EXPEDITEUR**
Port payé

If Undeliverable
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed.

Jan 1977/Volume 43/No 1

Canadian Dental Association/Association Dentaire Canadienne

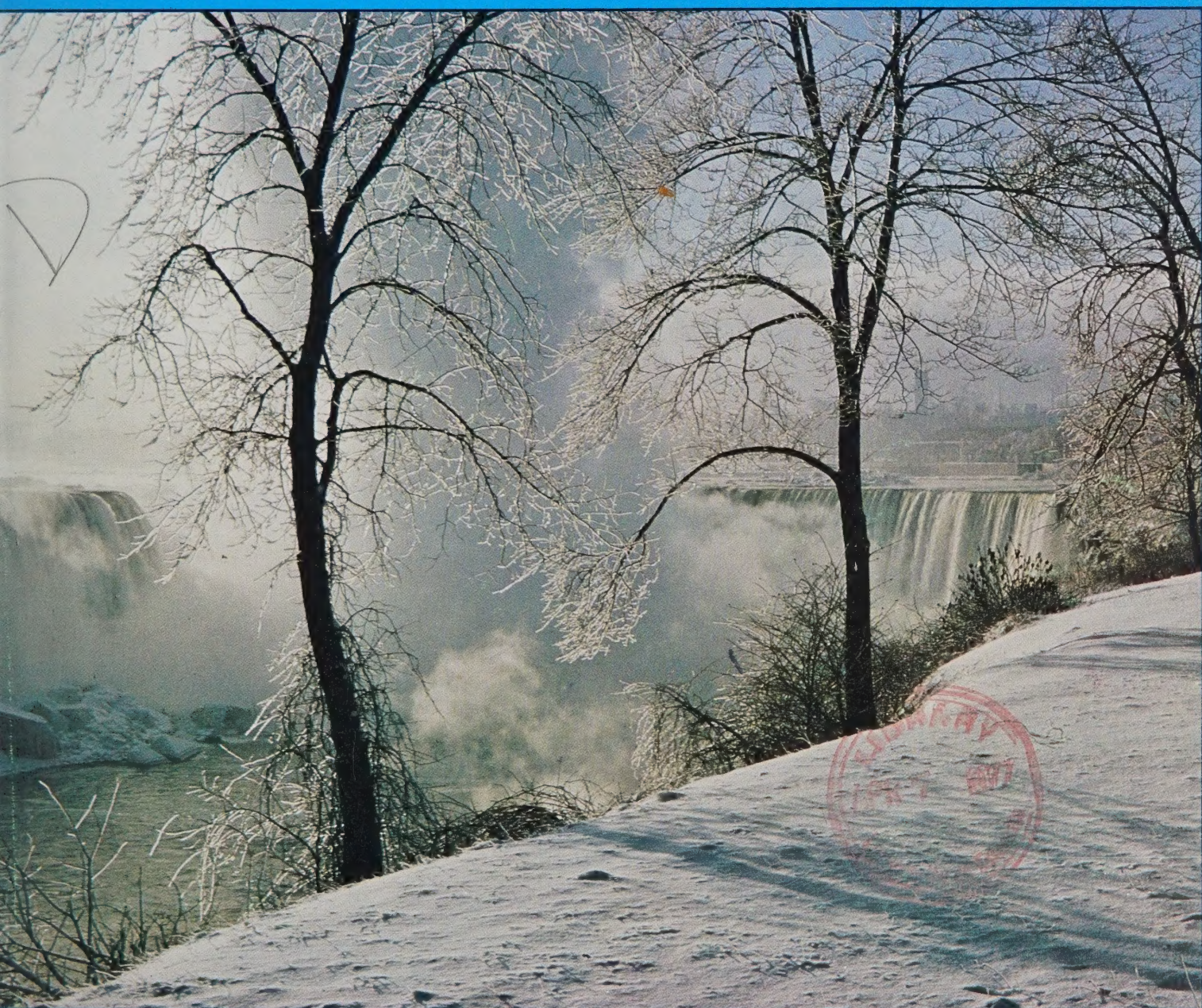
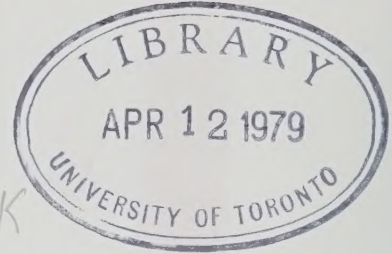
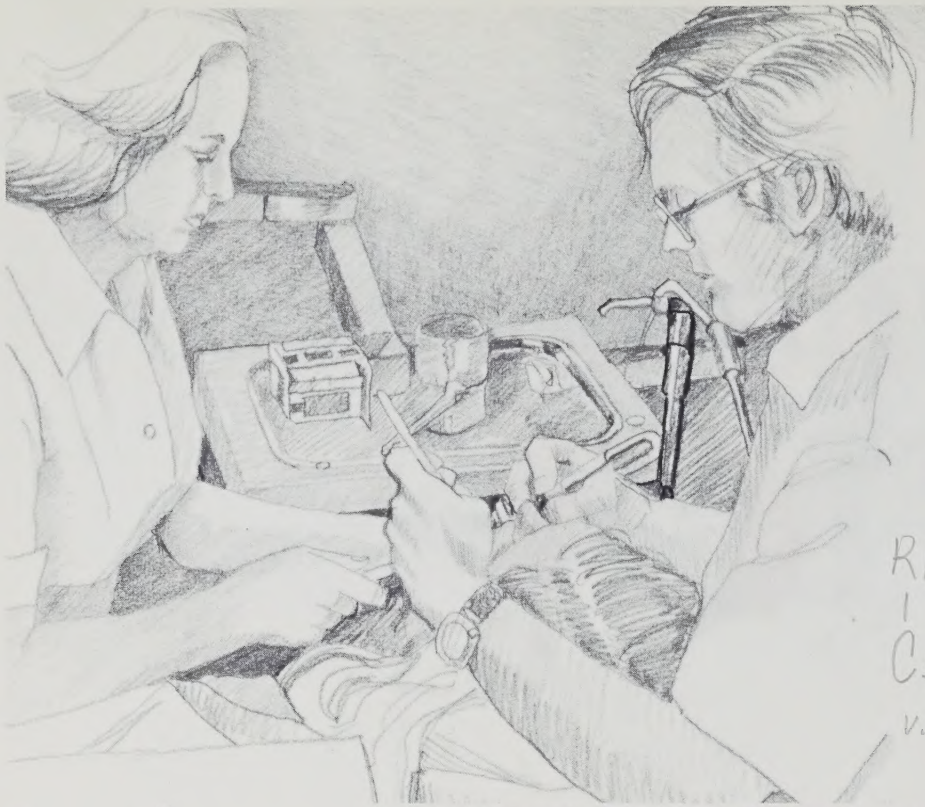


Photo by W. Aubrey Crich, DDS, FPSA

THIS ISSUE:
CANADIAN DENTIST HONORED BY AMERICAN PHOTOGRAPHIC SOCIETY
SCHOOL CHILDREN'S DENTICARE STUDY



**For the
exacting
requirements
in modern
patient care,
rely on
these
practical
new
Mosby
references**

A New Book!

PATHWAYS OF THE PULP

Consult this richly illustrated new book for comprehensive and up-to-date information on endodontics. It not only incorporates all pertinent areas of endodontics, but also explores related subjects not found in other references. You'll find material covering: the biologic effects and physical properties of endodontic materials and instruments, legal aspects and record keeping, combined endodontic-orthodontic treatment, and more!

Edited by Stephen Cohen, D.D.S., F.I.C.D., F.A.C.D. and Richard C. Burns, D.D.S.; with 32 contributors. October, 1976. 681 pages plus FM I-XVI, 8½" x 11", 1,737 illustrations and 2 color plates. Price, \$34.15.

New 2nd Edition!

ENDODONTIC THERAPY

Emphasizing the practical "how-to" aspects, this new edition thoroughly examines the three fundamental elements of endodontics (diagnosis, canal preparation, and canal filling), as well as the newest procedures and techniques currently in use. Emphasizing the practical aspects of root canal treatment, this new edition features more than 300 new illustrations of step-by-step procedures.

By Franklin S. Weine, B.S., D.D.S., M.S.D., F.A.C.D., F.I.C.D., F.A.C.S.S.; with 5 contributors. April, 1976. 2nd edition, 496 pages plus FM I-VIII, 7" x 10", 928 illustrations. Price, \$26.80.

A New Book!

HANDBOOK OF CLINICAL ENDODONTICS

An ideal companion to the above book, this practical new handbook guides you in stages through virtually every endodontic procedure. The extensive use of radiographs and illustrations, clarified by brief textual explanations, provides you with a convenient easy-to-use chairside reference. You find practical advice on routine diagnostic procedures, radiography, instruments, anesthesia, and surgical procedures.

By Richard Bence, D.D.S., M.S.; with the editorial assistance of Franklin S. Weine, D.D.S., M.S.D.; with 2 contributors. July, 1976. 253 pages plus FM I-XIV, 8½" x 11", 550 illustrations. Price, \$13.60.

for your staff . . .

A New Book!

CURRENT CONCEPTS IN DENTAL HYGIENE

The first volume in a biennial series, this new book informs your staff of the latest trends, techniques, and concepts in dental hygiene. Written by leading authorities in the field, the book consists of 14 chapters on both clinical and non-clinical subjects. Clinically oriented discussions examine such pertinent topics as: four-handed dentistry; dental hygiene; behavior modification; myofunctional therapy; dietary counseling; etc.

Edited by Suzanne Styers Boundy, R.D.H., M.S. and Nancy J. Reynolds, D.D.S.; with 15 contributors. January, 1977. Approx. 256 pages, 6½" x 9½", 99 illustrations. About \$13.30.

MOSBY
TIMES MIRROR

THE C. V. MOSBY COMPANY, LTD.
86 NORTHLINE ROAD
TORONTO, ONTARIO
M4B 3E5

Prevention between visits



Brushing and flossing. Good diet. And CREST.
The at-home contribution to preventive dentistry between professional visits.

CREST has the actual research and recognition of effectiveness.

In fact, CREST has more extensive research than any other fluoride dentifrice, and the only clinical research to prove *added* anticaries protection... over and above the protection provided by office-applied fluorides. Give your patients MORE protection... recommend clinically proven, clinically tested CREST.



"Crest has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care!"— Canadian Dental Association.



Leadership in research=Confidence in Crest

©1976 PROCTER & GAMBLE, TORONTO CAS-381

*Efficient, safe,
gentle prophylaxis...
it makes every
appointment easier
and every operating day
more productive.*



Presenting the

Dentsply-Cavitron[®] Seventy Six[®] Ultrasonic Dental Unit.

The **Seventy Six**...all the
best of the famous "660"
plus some things that are
new, different and better.



The Dentsply-Cavitron Ultrasonic Scaling Device is Acceptable for use in scaling and cleaning surfaces of teeth in conjunction with other suitable prophylactic measures.

30% less weight, 20% less bulk, so it fits readily in drawers or under low clearance cabinets.

Total solid state construction means many years of service. "Instant on" readiness when you touch the foot switch energizing control.

Linear frequency control provides easy, one-finger tuning.

Higher maximum power output, wider power range. For more efficient removal of heavy calculus and increased gentleness at the lower power level.

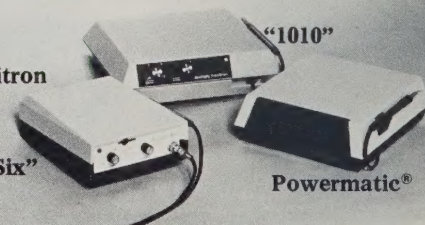
Easy to service. A plug-in handpiece for fast service and repair in the field; a sophisticated printed circuit board design controls most active components.

Accepts all Dentsply-Cavitron inserts, "P" and "TFI" series.

Tested and approved. Listed by Underwriters Laboratories, Inc. and C.S.A. Testing Laboratories.

Now...
three great
Dentsply-Cavitron
models to
choose from.

"Seventy Six"



Powermatic[®]

DENTSPLY[®]
Equipment

D Dentsply International, York, PA

© 1976 Dentsply International, Inc. All rights reserved.

Cavitron and Powermatic are registered trademarks of Cavitron, Inc. New York, NY.

PUBLISHER/Canadian Dental Association
SCIENTIFIC EDITOR/R. S. Turnbull, DDS
EDITOR/Diane Charter
FRENCH SCIENTIFIC EDITOR/Robert Lambert, DDS

ADVERTISING/PRODUCTION MANAGER/Anna Spencer
EDITORIAL SECRETARY/Mary Maxwell
CLASSIFIED ADVERTISING/Marie Cosgrave
CIRCULATION/Cathy Cronin

ISSN 0382-8514

Editorial

New Year's Message from the President	8
---------------------------------------	---

Special Feature

Canadian dentist honored by American Photographic Society	20
--	----

Regular Features

Announcements	4
Letters to the editor	10
Dentistry in the news	11
Deaths	16
Les actualités dentaires	23

Articles

The Waterloo preschool children's denticare study — Lewis, Magid and Jarrett	27
---	----

Classified advertising	36
------------------------	----

Advertisers' index	38
--------------------	----

Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1976 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454.

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association.

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1976 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22).

Veuillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences. Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise.

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Announcements/Avis

Canadian Dental Association
1977, Toronto, Oct. 22-28

Fédération Dentaire Internationale
1977, Toronto, Oct. 22-28

Canadian Meetings

Health Care Evaluation Seminar, University of Calgary, Division of Community Health Science, Feb. 6-11, 1977. Seminar will focus primarily on maternal and child health. Contact: Christina Bergland, Seminar Co-ordinator, Division of Community Health, University of Calgary, 2920 - 24 Ave. N.W., Calgary, Alberta T2N 1N4.

Workshop in Clinical Hypnosis, St. Paul's Hospital Auditorium, Saskatoon, March 26-27, 1977. Sponsored by the Saskatchewan Society of Clinical Hypnosis. Contact: Dr. Max Brook, 507 Canada Building, Saskatoon.

College of Dental Surgeons of British Columbia, Annual Convention, Empress Hotel, Victoria, April 20-23, 1977. Contact: Kenneth L. Croft, Managing Director, 1125 West 8th Avenue, Vancouver, B.C. V6H 3N4.

Ontario Society of Periodontists and Canadian Academy of Periodontology, combined seminar, Chelsea Inn, Toronto, May 6, 1977. Clinicians: Drs. Tony Melcher, Richard Ellen and Robert Schallhorn. Topics to include oral biologic and clinical experimental research as it relates to clinical periodontology. Contact: Dr. Steven Richmond, (416) 491-6211 or Dr. Frank Compton, (416) 922-4223.

Ontario Dental Association, at Sheraton Centre (formerly Four Seasons Sheraton), Toronto, May 8-11, 1977. Mrs. W. C. Durham, 234 St. George St., Toronto, Ont. M5R 2P2.

Les Journées Dentaires du Québec, at Queen Elizabeth Hotel, Montreal, May 16-20, 1977. Dr. R. M. Lang, 5171 Decarie Blvd., Montreal, Que. H3W 3C2.

Congress on Cleft Palate and Related Craniofacial Anomalies, at Royal York Hotel, Toronto, June 5-10, 1977. Advance registration closes December 31, 1976. Congress Secretariat, 191 College St., Toronto, Ont. M5T 1P7.

Western Canada Dental Society, at Banff Springs Hotel, Banff, Alberta. July 3-6, 1977. Dr. D. Pedlar, Publicity Chairman, Western Canada Dental Society, 1711 - 4th St. S.W., Ste 303, Calgary, Alta. T2S 1V8.

Canadian Society of Oral Surgeons, Annual Convention, Hyatt Regency Hotel, Toronto, October 28-31, 1977. Contact: Dr. W. Prusin, Convention Chairman, 919 Ellesmere Rd., Scarborough, Ont. M1P 2W7.

Pacific Dental Federation Convention, July 23-26, 1978, Vancouver. Contact: Dr. Ken Neuman, President, Pacific Dental Federation, 1125 West 8th Avenue, Vancouver, B.C. V6H 3N4.

International Meetings

International Congress for Preventive Dentistry and Oral Health, Costa del Sol at the Palacio de Congresos, Torremolinos, Spain. Initial dates set for the Congress, January 15-18, 1977 and March 5-8, 1977. Additional optional dates throughout January, February and March will be available. Sponsored by the American Society for Preventive Dentistry, 400 Shelard Plaza South, Minneapolis, Minnesota 55426.

Miami Winter Meeting, at Miami Beach, Jan. 23-26, 1977. Barbara Sims, 2 SE 13th St., Miami, Florida 33131.

Second Canadian Congress of Dentistry for Children

Dates: May 20-22, 1977 (Friday, Saturday, Sunday)

Place: Queen Elizabeth Hotel, Montreal

Registration: \$100.00

Information: Dr. David Kozloff

3333 Queen Mary Rd. #490

Montreal, Que. H3V 1A2

All dentists will be receiving a program pamphlet with complete information.

Deuxieme Congrès Canadien de Dentisterie Pédiatrique

Date: le 20-22 mai, 1977 (vendredi, samedi, dimanche)

Endroit: Hôtel Reine Elizabeth, Montréal

Inscription: \$100.00

Renseignements: Dr. David Kozloff

333 Ch. de la Reine Marie #490

Montréal, Que. H3V 1A2

Tous les dentistes recevront bientôt un programme contenant tous les renseignements.



“...but
if you feel
any pain,
take one or two
N 222 * tablets.”

Not every patient needs an analgesic after dental care — but some do, even though you have done everything possible to avoid any patient discomfort.

When a patient is in pain, or when there is a possibility that pain will occur later, suggest N 222 * tablets.

222 * is a reliable analgesic — you and your patient can depend on it.

INDICATIONS: For relief of mild to moderate pain, fever and inflammation as in influenza, common cold, low back and neck pain, headache, trauma, following dental and surgical procedures.

DOSAGE: Adults — 1 or 2 tablets one to three times daily; Children's dosage, when recommended by a physician: 10 to 14 years, one tablet, one to three times daily; 5 to 10 years, one-half tablet, one to three times daily.

CONTRAINDICATIONS: Gastrointestinal ulceration and sensitivity to any of the components.

WARNINGS: Salicylates increase the effects of anticoagulants. Caution is necessary when salicylates and anticoagulants are prescribed concurrently. Also, salicylates may depress the concentration of prothrombin in the plasma. Large doses of salicylates may affect insulin requirements of diabetics. Salicylates may potentiate sulfonylurea hypoglycemic agents. Analgesic abuse (excessive and prolonged therapy) has been associated with nephropathy. TO AVOID

ACCIDENTAL POISONING ACETYSALICYLIC ACID PREPARATIONS MUST BE KEPT WELL OUT OF REACH OF CHILDREN.

PRECAUTIONS: Give with caution to patients with asthma, other allergic conditions, bleeding tendencies, or hypoprotrombinemia. Salicylates can produce changes in thyroid function tests.

Observe care in use of codeine, although tolerance and addiction are rare. Give codeine with caution to patients with severe respiratory depression. Its depressant effect may be enhanced by concurrent administration of sedatives and tranquilizers.

ADVERSE REACTIONS: Acetylsalicylic acid: *Gastrointestinal:* dyspepsia, heartburn, nausea, vomiting, diarrhea, gastrointestinal ulceration and bleeding. *Ear reactions:* tinnitus, hearing loss. *Hematologic:* anemia, leukopenia, thrombocytopenia, purpura. *Dermatologic and Hypersensitivity:* urticaria, angioedema, pruritus, various skin eruptions, asthma and anaphylaxis. *Miscellaneous:* mental confusion, drowsiness, sweating and thirst.

Codeine: Average or large doses may cause various gastrointestinal symptoms such as nausea, vomiting and constipation.

Caffeine: May cause nausea, nervousness, insomnia, headache, vomiting, palpitation, vertigo, muscle tremor, sensory disturbances, excessive diuresis in sensitive patients. Large doses may cause gastric ulceration.

FULL INFORMATION AVAILABLE ON REQUEST

HOW SUPPLIED

N 222* Tablets — White, scored, engraved 222 on one side. Each tablet contains: acetylsalicylic acid 375 mg, caffeine citrate 30 mg, codeine phosphate 8 mg. Available in tubes of 12; bottles of 40 and 100; also bottles of 60 with safety cap.

*Trademark



(MC-390a)

Frosst

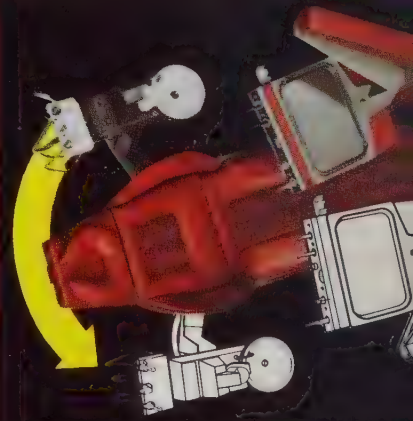
FOUNDED IN CANADA IN 1899
CHARLES E. FROSST & CO.
KIRKLAND (MONTREAL) CANADA



Regency Model II Chair travels longitudinally, keeps oral cavity in vertical plane. Model I available without longitudinal travel.



Dial any position with Regency's infinite programming dial. Pressing Quik-Stop button stops chair movement instantly, if desired.



Mirror image in moments. Delivery unit and assistant's module swing around chair in seconds. Seat/pad can be reversed.

THE REGENCYTM CONSORTTM SYSTEM.

New: Comfort, convenience,
efficiency, flexibility...
they're all together.

Taken together, the features of the new S. S. White Regency[®] chair and Consort[®] chair-mounted unit add up to increased productivity.

With the Consort unit, for instance, you can practice with or without an assistant, seated or standing, in any position around the clock. A unique foot control enables a handpiece to double as a syringe. You can cut, blow chip air, water flush, and resume cutting with one instrument. Think of the time you save!

Regency / Consort is the only system that is completely reversible in seconds. Both the Consort unit and the assistant's module can be moved completely around the chair—quite an advantage if your hygienist is left-handed, or your traffic pattern requires left side chair access.

There's much more—more of the features that improve your efficiency, increase your productivity. Ask your dealer for a demonstration.

NEW REGENCY / CONSORT.
THE SYSTEM THAT
PUTS IT ALL TOGETHER.

PENWALT

S.S. WHITE

DENTAL PRODUCTS INTERNATIONAL
PHILADELPHIA, PENNSYLVANIA 19102



Armrests support arms and
allow sitting and reclining
position. Armrests lock securely,
allowing easy access for patient.



Consort unit can be placed right,
left, or over patient, has pivoting
work surface. You can work any
position around the clock.



Mobile assistant's module has
cuspidor and cup filler. It can be
positioned for assistant or doctor
working alone.

EDITORIAL

New Year's Message from the President

As the year 1977 begins I welcome this opportunity to comment on some of the issues facing the Canadian Dental Association.

There are many things that are new about our Association in this new year: a new Headquarters Building in Ottawa; a new Executive Director in Mr. Lloyd Stevenson; and, since mid-September, a new President. We also have a number of new issues facing us, one of these being the anti-combines legislation which was amended July 1, 1976, to cover all service industries including the services offered by the dental profession.

One of the more important items being dealt with by the CDA is the 1977 Convention of the Fédération Dentaire Internationale to be held in Toronto this October. This will mark the first time for Canada to host this international event. Planning has been underway for more than two years by the Convention Committee under the chairmanship of Dr. Murray Cornish. We owe a great debt to the Convention Committee and to the hundreds of volunteers they have recruited to assist them. The time and effort that has thus far been expended is considerable and countless meetings are yet to be held as the October deadline approaches. The 1977 CDA Convention will be held in conjunction with the FDI meeting.

Going into 1977 we are again attempting to get as many members as we can from Ontario and Quebec to join CDA voluntarily. This effort is being carried out jointly by the corporate members involved and the Canadian Dental Association. There are three main points to be considered when we are talking about voluntary member-

ship, the first being that the more members we can obtain from Ontario and Quebec the greater the revenue for the Association. In addition, the number of members from these two provinces who join CDA determines their representation on the Board of Governors. A final point on voluntary membership has to do with representation to the Federal Government. We must have a strong national organization to ensure that when we do make presentations on behalf of Dentistry we can demonstrate that we are speaking for as near to 100 per cent of the dentists in Canada as possible. We cannot afford to be a fragmented profession.

As I mentioned earlier, we have been in our new offices in Ottawa since early August of last year. The move was made with some difficulty as only three members of the CDA staff from Toronto moved with us. The staff in Ottawa at present consists of 15 members. To those of you who have not had an opportunity to visit our new headquarters building may I tell you that you will be very proud when you do visit. An official opening is planned for the spring of 1977. We do have some concerns over the amount of rentable space available, but negotiations are currently underway with potential tenants.

In 1977 we plan to have two meetings of the Board of Governors instead of just one and both will be held in Ottawa and not during the CDA Convention as has been the practice in previous years. We realize it is expensive to hold two meetings a year, but we are convinced this will pay dividends in terms of better communication and dialogue among the corporate members

in making many key decisions and in preventing misunderstandings.

Third Party Programs are increasing year by year. I was surprised to hear recently that some cities in Ontario have from 30 per cent to as high as 70 per cent of the dental fees in their communities paid by a third party. We must all become thoroughly familiar with these programs concerning such matters as assignment, sending of records, mediation problems, etc. We must know what our responsibilities are in dealing with government dental plans and with various dental plans being sold by insurance companies.

The Anti-Combines legislation referred to earlier is the newest problem facing our profession. As a result of amendments which came into effect July 1, 1976, it is now illegal for members of the dental profession to agree or arrange among themselves to lessen competition unduly in relation to the provision of dental services or other charges. Thus, agreement among dentists, who are competitors, to charge a uniform fee or a minimum fee for similar services, to share business, or to refrain from treating patients in a particular area, may be illegal. For example, an agreement among dentists in a particular area to adhere to the fee schedule set out in the "Fee Guide" published by the Association would likely constitute an offence.

The Association's legal counsel are presently studying the implications of the amendments to the Comines Investigation Act with respect to the Fee Guide and other matters such as restriction on advertising.

Continued on page 10



You've finished his fluoride treatment. Now let Colgate's fluoride take over.

Colgate's* MFP* fluoride gives your patients extra protection
to fight decay between check-ups.

It's a fact. Our clinical tests have shown that the regular use of Colgate with MFP fluoride **alone** significantly reduce the incidence of new caries. Used in conjunction with your topical application therefore, it follows there could be an even greater reduction. Colgate with MFP provides specific and significant advantages. Regular use of Colgate makes

teeth more **resistant to decay**. We believe that Colgate's MFP (sodium monofluorophosphate) is effective in converting tooth enamel apatite into fluorapatite (a calcium fluorophosphate) because of the chemical similarities of the two.

2. While the staining of teeth has been a problem associated with some dentifrices, it is reassuring to know that this is not a problem with

Colgate MFP.

3. Colgate MFP is known for its **fluoride stability**. Sodium monofluorophosphate is still present and effective even after three years.

So after you've completed your fluoride treatment, tell your patients about the protection that Colgate Dental Cream with MFP can provide. And give them a new fighting chance against decay.



"Colgate has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."

*TM Reg'd.

Colgate-Palmolive Canada.

Klondike dancing girls

The cover photograph of Klondike dancing girls featured in the November 1976 issue of the Journal of the Canadian Dental Association is a singularly inappropriate cover subject for a professional journal, and hardly enhances the image of the dental profession. While it might be argued that a study of human anatomy is an essential prerequisite for practising dentistry, I wonder if the Journal of the Canadian Dental Association needs to compete with those two anatomical journals, Playboy and Penthouse, in their exposure of the subject. Can the Journal not adopt a more professional face, omitting the costly and irrelevant cover photos, and style the cover in the manner of the British and Australian Dental Journals by listing the contents on the cover with perhaps the coat of arms of the Canadian Dental Association?

With regard to contents, why is the Journal of the Canadian Dental Association the only national dental journal that does not review new dental books? Even the Journal of the Ontario Dental Association makes an effort in featuring book reviews. The Journal is most remiss in omitting this important feature of all prestigious journals, and I

would hope that you will establish this service as a regular feature at your earliest convenience.

*G. H. Sperber, BDS, MS, Ph.D.
Professor of Oral Biology,
Faculty of Dentistry,
University of Alberta.*

I wish to report my displeasure to you relative to the cover picture of the November 1976 Journal of the Canadian Dental Association.

I realize that in the planning of every convention there is customary entertainment provided to those attending the convention. I have no objection with this whatsoever; however, in a day and age when government sees fit to make tax deductions more stringent relative to our attending conventions, I would rather see the highlight of the convention displaying something of dental importance relative to the convention held, rather than a chorus line.

I certainly admit it is a colorful presentation, eye-catching and in going through one's mail it certainly puts the Journal at the top of the pile of things to be perused. Notwithstanding, there is still the problem that I would prefer to see the young ladies' dentitions rather than their undergarments. I know of no

other precedent of this type in any of the other dental journals that I receive.

We no longer enjoy our position in an ivory tower and with the constant scrutiny of lay people and government agencies itching to clamp down on the "Professionals", I feel that our national body is well advised to maintain a dental theme as part of the official publication of our Society.

*Mitchell Levine, DDS
Willowdale, Ontario.*

Olympic dental clinic

I am writing to correct certain information in the news item "Free dental treatment popular at Olympics" which appeared in the October issue of the Journal.

I was not the only organizer of the free dental clinic set up at the Olympic Village: Dr. Roch Paradis and Dr. Robert L'Heureux both contributed a great deal.

The dentists involved in the emergency treatment of athletes numbered 22 general practitioners and six specialists in Diagnosis, Radiology, Orthodontics, Oral Surgery and Endodontics. The dentists were from all over the Province of Quebec.

*Michel Jahjah, DDS
Montreal, Quebec*

Editorial . . . Continued from page 8

Some possible alternatives for the dental profession would be not to have a fee guide or not to have dollar signs on a fee guide. A third option might be to have a broad range of fees for specific services.

During the Board of Governors' sessions in Edmonton last September one whole day was set aside for discussion of our new constitution which is now in operation. The Board also approved a \$25.00 per member increase in the annual membership fee from \$65.00 to \$90.00. this increase

will improve CDA's financial picture considerably.

One item of business which was approved in Edmonton, but which did not receive a great deal of publicity, was a new method of recognition for members of the profession and others who make outstanding contributions to dentistry. We have always had Honorary Memberships, but now we will also be presenting a Distinguished Service Award and a Certificate of Merit. This latter award will be given to retiring members of the Board of Governors

along with council chairmen as they complete their term of office.

I have attempted to give you an overview of where we stand at the present time, along with a brief outline of some of the issues facing Canadian dentistry. There are, of course, many other issues and as I have an opportunity to address you in person from time to time we shall perhaps get into these other issues and elaborate further on those mentioned in this Editorial.

**Michael J. Crompton,
Moncton, New Brunswick**

Dentistry in the news

FREE PRESS EDITORIAL TAKES MANITOBA GOVERNMENT TO TASK OVER DENTAL CARE PROGRAM FOR CHILDREN

A recent editorial in the Winnipeg Free Press took the Manitoba Government to task over its handling of the new dental care plan for children in the province. The editorial defined the problem areas, supported the position taken by the Manitoba Dental Association, and advised Manitobans to carefully consider the objections to the program being voiced by the province's dentists.

We felt the editorial would be of interest to other dentists across Canada and are therefore reprinting it here with the permission of Peter McLintock, Editor of the Winnipeg Free Press.

Biting the dentist

"Why should Manitobans be required to pay three times as much per patient for the new "free" government plan to provide child dental care than they need have paid for superior care offered by the Manitoba Dental Association? Why are these figures surfacing now, on the eve of the pilot government program, rather than much earlier, when reaction could have made the government aware of how the public feels about such costs for inferior care?

"The answer to the second question, that of the delay in making relative costs known to the public, is readily available. The president of the Manitoba Dental Association, Dr. Ralph Crawford, said the association was warned, indeed threatened, by the government that any high profile publicity campaign mounted by the dentists would destroy any negotiating power available to them.

"Now, with what Dr. Crawford describes as "20-20 hindsight," the association believes that it should have

ignored the government threat and taken its case directly to the people. Dr. Crawford claims that the endless meetings which took place between the representatives of the government and the association did not result in the adoption of a single association opinion, a single piece of advice, or a single recognition of professional concern in the new government program.

"In what bears a remarkable resemblance to the tactics employed by the government during the implementation of compulsory automobile insurance, an unswerving course was followed to institute, unchanged, the original government plan for child dental care. Missing this time was the public outcry, presumably because the government, learning from its past mistakes, successfully muzzled the dentists under the guise of asking them to act like gentlemen, which they did, only to discover that the conduct was entirely one-sided.

"As a result, beginning this year with seven nurses trained in Saskatchewan, the government's pilot program will service six-year-olds in the Gimli area. Eventually, the government expects to provide, through school clinics, dental services to children between the ages of six and twelve. The dentists object to the plan, and Manitobans should consider their objections carefully. To date, there has been no explanation of how these school clinics plan to service emergency cases which occur on weekends or during the summer months, when the government clinics will be closed. There has been no satisfactory explanation for the situation under the government scheme which calls for only one initial exami-

nation and diagnosis by a dentist, after which the child could go for six years or more without seeing anyone but a dental nurse, and then only on recall.

"Since child care represents about 40 per cent of a rural dentist's business, there has been no visible provision for the situation predicted by the dental association, which believes that the removal of this business will force rural dentists to leave their communities, thereby depriving anyone over the age of 12 from ready access to dental services.

"The Manitoba government has allocated \$500,000 for the first year's operation of its scheme, and expects to provide 1,500 treatments. This works out to \$330 per patient, and presumably includes start-up costs. In Saskatchewan, where a similar scheme has been in operation for a number of years, the yearly per patient cost runs between \$200 and \$285. The Manitoba Dental Association claims it could operate on a community, not only a school basis, and provide child care for an average of \$100 per patient-year.

"Manitobans should consider carefully another aspect of the scheme. It marks the first time, in the field of medical service in this province, that freedom of choice will be denied the patient. This will not happen immediately, but if, as the dental association predicts, the scheme reverses the present trend toward more fully-qualified rural dentists, Manitobans not fortunate enough to live in urban areas will find themselves with only one source of dental treatment — the dental nurse who may be assigned to them."



The FDI World Dental Congress held in Athens, Greece, this past October drew more than 5,000 dentists from around the world, including over 600 from Canada. A booth was set up at the Congress to promote attendance at the 1977 FDI Congress to be hosted by the Canadian Dental Association in Toronto next October. Shown at the booth (l to r) are: Dr. George Beagrie, Toronto; CDA President Dr. Michael Cripton, Moncton; CDA Conventions Committee Chairman, Dr. Murray Cornish, Toronto. At the far right of the photo is Dr. Miet Kamienski, Toronto.

PROGRESS IN PERIODONTICS: MAIN THEME OF FDI SCIENTIFIC PROGRAM IN GREECE

One of the main themes of the scientific program featured at the 64th Annual World Dental Congress of the Fédération Dentaire Internationale, held in Athens, Greece, was "Progress in Periodontics". Clinical trials, different forms of treatment, and causative factors were all discussed during one of the sessions.

Professor R. D. Emslie of the UK pointed out that clinical trials could usefully be performed by general practitioners as the progress of periodontal diseases is generally slow and the chronic patients tend to be loyal and keep to the same dentist. The patient should always be informed, however. If different methods are to be used they should have been previously tested on animals or in vitro. A program should be drawn up and followed throughout the investigation. Negative findings suggest that the result is influenced by too many variables.

Patients can act as their own controls by means of a "wash out period" or if "half-mouth" trials are carried out. The trials should be based on random selection and the results preferably judged by more than one person.

Retrospective studies can be performed by means of x-ray pictures. The long-cone technique will give a distinct radiograph and diminish the effects of the angle of the beam. When two bite-wing radiographs on each side are

used, overlapping can be avoided and measurements carried out with only minor divergencies.

Surgical pocket therapy was discussed by Dr. S. P. Ramfjord of the USA. He emphasized that the main problem was to make the root surface biologically acceptable to the surrounding tissues and then to prevent the plaque from spreading downwards. Thus surgical removal of pathological pockets has no advantage in comparison to curettage and can even destroy the reattachment and cause the patient esthetic problems. Curettage can be considered successful when further loss of tissue is prevented. Persistent pathological pockets without any bleeding can be looked upon merely as inactive, anatomical defects. All groups of teeth can be treated by curettage though the upper molars show somewhat poorer results than the other teeth. The age of the patient does not constitute a hindrance to any form of therapy.

A sophisticated method for treating intrabony defects was presented by Dr. B. Ellegaard of Denmark. As the technique is difficult, the cases have to be selected carefully and the patient should be able to maintain adequate oral hygiene.

These intrabony defects are characterized by a vertical loss of bone support and can be classified according

to whether one, two or three bony walls remain. When granulations have been removed and the tooth surface scaled, the intrabony defect is filled with bone grafts if two or three walls remain. The defect is then carefully covered with a 2 mm. thick free mucosal graft transplant to prevent the epithelium from growing down. The results are encouraging but the method is complicated and can only be used on localized vertical defects.

The effect of controlled oral hygiene in healing following periodontal surgery was demonstrated by Dr. J. Lindhe of Sweden. Emphasis was laid on the role of plaque in the development and progression of periodontal disease. Subgingival plaque causes inflammatory lesions in the pocket with a subsequent loss of connective tissue and produces intrabony defects. The treatment should comprise a careful elimination of the plaque and re-establishment of the gum contour so that the patient can keep the teeth clean. Instructions should be given prior to surgery and the post-operative plaque should be controlled and assessed. Mouth rinsing with chlorhexidin twice a day for two weeks following periodontal surgery and professional tooth cleaning every second week was recommended. Irrespective of the technique used, it has been proved that chlorhexidin and oral hygiene reduce plaque and the gingival index to near zero. If the plaque control is sufficient, healing can be predicted. If not, the process recurs.

Finally, the relationship between plaque and occlusal factors was elucidated by Dr. S. Nyman of Sweden. He emphasized that plaque is to be regarded as the causative factor of periodontal diseases and showed that treatment comprising removal of the plaque will lead to healing. Experimental studies have been performed on beagle dogs. It was demonstrated that enhanced occlusal trauma applied to a tooth resulted in an increased mobility and an enlarged periodontal space. Biopsies revealed, however, that trauma did not cause loss of attachment and no periodontal disease was present, provided the plaque was completely controlled.

Good enough to be the only one.



Instead of being a second toothpaste, Sensodyne can be recommended as the only toothpaste a patient with sensitive teeth need use. The strontium ion in Sensodyne's formula is absorbed to the dentin and cementum to block pain impulses.

Independent tests* have also proven Sensodyne's polishing effectiveness and ability to aid in removing plaque. So using Sensodyne as an adjunctive toothpaste is unnecessary.

And Sensodyne's pleasant flavour encourages regular brushing. Combining

Quality products for dental health.

Sensodyne's two-way action dentifrice and the Py-co-pay Softex toothbrush provides the ultimate in preventive care for hypersensitive teeth.

Sensodyne. Good enough to be the only toothpaste a patient with sensitive teeth need use. Write for free professional samples of Sensodyne to:

Sensodyne

Block Drug Company (Canada) Limited,

36 Northline Rd.,
Toronto, Ontario M4B 3E3

*Reference available on request.



Newly-elected executive of the Newfoundland Dental Association (l to r): Dr. Gordon Anthony, St. John's, secretary; Dr. Robert Janes, Gander, president-elect; Dr. Darroch Hallett, St. John's, past president; Dr. Dennis Jackman, Grand Falls, second vice president; Dr. George Curtis, St. John's, first vice president. Missing is Dr. Paul O'Brien, St. John's, treasurer.

NEW DEADLINE FOR CFDE TEACHER TRAINING FELLOWSHIP APPLICATIONS

Applications are now being accepted for teacher/researcher training fellowships for the 1977/78 academic year, it has just been announced by the Canadian Fund for Dental Education.

The new deadline for filing applications is *March 1, 1977*. Forms and additional information may be obtained from the dean's office in any Canadian dental school or the Canadian Fund for Dental Education, Suite 205, 44 Eglinton Avenue West, Toronto, Ontario M4R 1A1.

Candidates must be Canadian citizens or landed immigrants who have completed an undergraduate course in dentistry, dental hygiene or a program in science and be eligible for admission to a graduate school.

Applicants must declare their firm intention to become a teacher and/or researcher in a Canadian faculty of dentistry or a school of dental hygiene. Preference will be given to those applicants who will return to a *full-time* teaching/research position. Minimum commitment in this regard is two days per week. A fellowship recipient is obligated to give a year's full-time service to a school for each year of full fellowship support, or a year's half-time service for each year of half fellowship support. In rare instances where teaching commitments are not fulfilled, fellowship awards must be repaid in full.

Each fellowship is for one year of study at the graduate level. The fellow-

ship may be renewed if progress is satisfactory.

Two types of fellowships are awarded annually:

- (a) CFDE Full Fellowship: awarded to applicants who have either a legal or a strong decanal commitment for full-time employment after training.
- (b) CFDE Half Fellowship: awarded to applicants who have either a legal or a strong decanal commitment for half-time employment after training or to applicants who are enrolled in a basic science program (which is only of monetary value if the student obtains university employment after training).

The value of the fellowships will be determined annually by the Advisory Committee on Fellowship Selection and the Board of Trustees.

It is understood that CFDE fellowship recipients will have to obtain additional support from other sources to completely finance their studies. However, no CFDE fellowship is tenable in addition to a major award (usually in excess of \$8,000).

Since the program was started in 1964, the Fund has awarded 163 fellowships totalling \$416,239 to 107 dentists to help them pursue teaching/research careers. Seventeen fellowships totalling \$22,378 have also been awarded to assist 12 dental hygienists to prepare for teaching careers in Canadian schools.

American Dental Association calls for massive effort against illegal dentistry

A massive effort to prevent illegal dentistry was called for by the American Dental Association's House of Delegates during its 1976 annual session. The delegates asked the Board to allocate \$1.1 million for the effort from reserves in 1977.

The resolution adopted by the House states:

- That all Americans should have access to dental care provided by adequately trained and fully competent health care professionals;
- That the responsibility for the provision of denture care rests with the dentist, and the provision of sub-standard care solely through individuals of lesser training and competence is firmly opposed;
- That the American Dental Association and its constituent and component dental societies should take immediate steps to identify the economic and other barriers to full access to professional care within their jurisdictions and to seek remedies that will remove those barriers.

The House also adopted after-care guidelines on complete and removable partial dentures for the guidance of the profession.

The House of Delegates called for a conference on illegal dentistry in early 1977 and adopted the following revised definitions for the terms "denturist" and "denturism":

Denturist: a person who is educationally unqualified and not licensed, for the necessary protection of the public, to practice dentistry in any form on the public.

Denturism: the unqualified as well as the illegal practice of dentistry in any form on the public.

Pickets representing self-proclaimed "denturists" in Nevada marched in front of the Convention Centre during one day of the House of Delegates' annual session.

\$1,500 FELLOWSHIP FOR A UNIVERSITY DENTAL TEACHER

The Canadian Fund for Dental Education invites applications from dental teachers for the 1977 fellowship sponsored by Warner-Lambert Canada Limited. March 1, 1977 is the new deadline for filing applications.

According to CFDE Trustee Dr. James A. Guest, "the purpose of the award is to provide an opportunity for an established teacher in one of the Canadian schools of dentistry to refresh and extend his/her knowledge in any field of dental education or research."

Candidates must be full-time members of the teaching staff of one of the Canadian schools of dentistry with a minimum of five years of university teaching experience.

The proposed program of study must be well defined and minimally it must be of approximately one month's duration. Application by letter giving complete details of the proposed program of study should be sent to the Canadian Fund for Dental Education, Suite 205, 44 Eglinton Avenue West, Toronto, Ontario M4R 1A1, to arrive no later than March 1, 1977. It should be accompanied by a curriculum vitae and a letter of support from the applicant's dean or other appropriate senior university official indicating approval of the study period and its benefits to the university and the individual staff member.

Upon completion of the study period

Smoking prohibited at ADA conferences

The use of smoking tobacco will be prohibited at all official conferences of the American Dental Association. This decision was made during the recent annual session of the ADA House of Delegates in Las Vegas.

The House also went on record as encouraging state and local dental societies to make available to members and auxiliary personnel continuing education in cardiopulmonary resuscitation.

CFDE will require a written report on the experience.

Full particulars of the fellowship may be obtained from the office of the dean in each dental school or the Canadian Fund for Dental Education.

All applications will be carefully

reviewed by CFDE's Advisory Committee on Fellowship Selection and the award winner selected for the approval of the Board of Trustees.

Since 1971 this fellowship has been sponsored annually by Warner-Lambert Canada Limited.

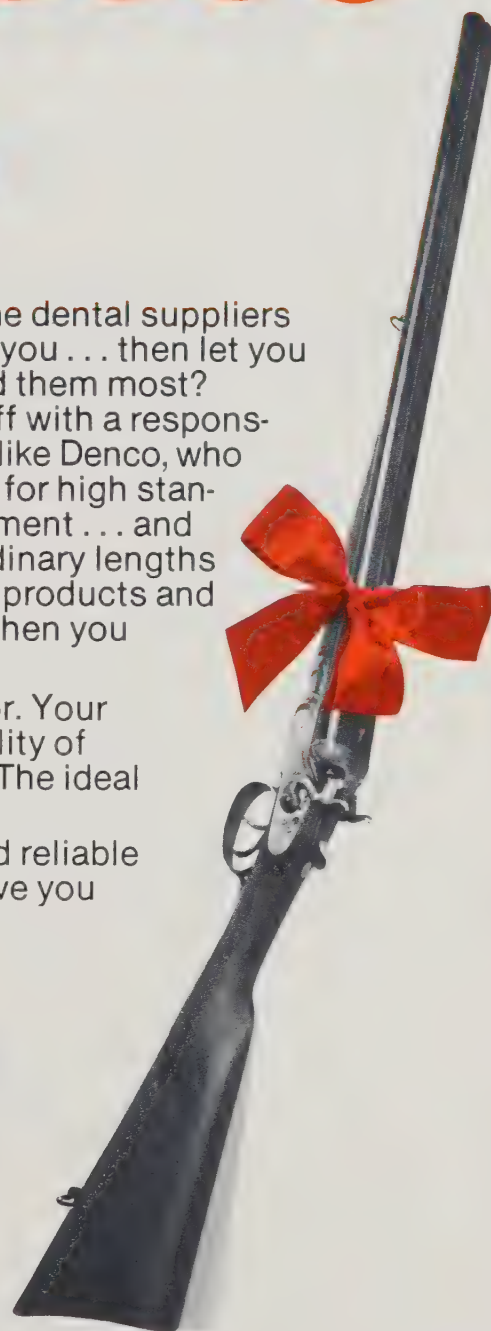
Wedded Bliss

Ever notice how some dental suppliers pursue you and woo you . . . then let you down when you need them most? You'd be far better off with a responsible full-line supplier, like Denco, who shares your concern for high standards of dental treatment . . . and who goes to extraordinary lengths to deliver the kind of products and services you need, when you need them.

Think about it, Doctor. Your expertise . . . our quality of goods and services. The ideal match.

We're responsive and reliable . . . and, we won't leave you in the lurch.

DENCO



TIMER FAILURES IN DENTAL X-RAY UNITS

The Health Protection Branch has recently become aware of timer failures that have occurred in dental x-ray units marketed in Canada. The failure results in such units continuing to emit x-rays without automatically turning off. Such a failure violates the standards of

performance specified in the Radiation Emitting Devices Regulations, and may cause a serious overexposure to the patient, particularly if the operator does not realize that a timer failure has occurred and does not release the exposure switch.

It is suggested that appropriate caution should be exercised by all users of dental x-ray equipment.

The Health Protection Branch would appreciate receiving any additional concerns dentists may have on such devices. Comments should be submitted to the Director, Radiation Protection Bureau, Environmental Health Directorate, Health Protection Branch, Department of National Health and Welfare, Ottawa, Ontario, K1A 1C1.

DENTAL HYGIENISTS

**(Required
for various locations
in the Province of
Alberta.)**

Alberta — an ideal location to live and work — offers excellent opportunities for career-minded dental hygienists. Programs will vary as to location, but in general hygienists are required to perform community educational and preventive preschool and school dental programs.

Actual duties include conducting clinical inspections; compiling statistical data and keeping records; teaching in classrooms; providing necessary follow-up services in community relations and dental health education. Salary and annual vacation periods vary as to location, but salary is generally negotiable depending on qualifications. Excellent employee benefits are offered.

Applicants must be graduates of an accredited program of dental hygiene.

Applications and additional information can be obtained from:

**B. Zier,
Local Health Service,
4th Floor, Administration Building,
10820 - 98 Avenue,
Edmonton, Alberta, Canada T5K 2B6.**

The logo for the Government of Alberta, featuring the word "Alberta" in a stylized, bold, sans-serif font. The letter 'A' is particularly large and has a unique shape, with the 'l' and 'b' also being stylized.

SOCIAL SERVICES
AND COMMUNITY HEALTH

CDA retirement Savings Plan

Unit values of the Canadian Dental Association Retirement Savings Plan stood as follows on November 30, 1976:

<i>Common Stock Fund</i>	\$25.779
<i>Fixed Income Fund</i>	\$18,250
<i>Guaranteed Fund</i>	\$13.162

Total assets (market value) of the plan were \$22,806,135.48.

For further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George St., Toronto, Ont. M5R 2P2.

DEATHS

Blandin, Murray Howard, 80. Etobicoke, Ont. Royal College of Dental Surgeons of Ontario, 1919. 27-10-76. Survived by Grace (wife).

Bratten, Chester Roland, 54. Vancouver, B.C. McGill University, 1950. 16-11-76.

Florence, Donald Eugene, 61. Fort McMurray, Alta. University of Toronto, 1941. 1-11-76.

Verth, John, 74. Toronto, Ont. University of Toronto, 1926. 29-10-76. Survived by Edna (wife); Dr. Tom Verth (son); and Mrs. Anita Hallas (daughter).

Instructions to Contributors

The Journal of the Canadian Dental Association is currently soliciting research and clinical articles for publication. Interested contributors are asked to use the following outline of requirements when preparing manuscripts.

Manuscripts: Manuscripts should be submitted to the editor with a covering letter requesting consideration for publication in the Journal. Send two copies — original and a carbon — typewritten with all material (text, quotations, tables, legends, references, etc.) double-spaced, on one side of the sheet, $8\frac{1}{2} \times 11$ inches, with ample margins on all four sides. The author should always retain a carbon copy of material submitted. Every article should contain a summary of the contents.

Original articles are considered and accepted subject to the understanding that they are submitted solely to this Journal, and will not be reprinted without the consent of both the editor and the author.

The editor reserves the right to fit articles within the space available and to make usual editorial alterations in manuscripts; these include such changes as are necessary to ensure correctness of grammar and spelling, clarification of obscurities or conformity to Journal style. In no case will major changes be made without prior consultation with the author. The senior author will receive either the edited manuscript or galley proofs for checking prior to publication.

Article Titles Make article titles descriptive but as concise as possible. Long titles discourage reading, present

typographical and layout problems and create difficulties in library indexing.

References: Authors should limit references to published work to the minimum necessary for guidance to readers wishing to study the subject further. They should not quote articles they have never seen. Except in review articles, the maximum number of references should not be more than 25. References should be numbered in the text and should be set out in a separate numbered list at the end of the article.

For journal references, give the author's name, article title, journal name, volume number, first page of article, and year of publication:

1. Gibb, G. H. Methods of achieving improved amalgam restorations. *J Canad Dent Ass* 30:413, 1964.

For books give the author's name, book title, location and name of publisher, year of publication:

2. Kilpatrick, H. C. *Work simplification in dentistry*. Ed. 2. Philadelphia, Saunders, 1964.

Illustrations: Line and halftone illustrations should be of high quality for satisfactory reproduction.

Photographs — Handle photographs carefully. Do not bend, fold or use paper-clips. Photographs should be unmounted, untrimmed, good, sharp, black and white glossy prints, preferably not larger than 10×8 inches. Color work can only be published at the author's expense. Magnification of photomicrographs must always be given. Photographs must not be written on or typed on. On the back of each photograph, very lightly and in pencil, write the author's name, the figure number and indicate the top edge. If a

figure contains two or more photographs, do not mount the parts; on the back of each photograph write very lightly in pencil the figure number and part letter (Figure 1a, etc.) and indicate the top edge. Patients must not be recognizable unless the written consent of the subject to publication has been obtained.

Drawings — Figures, graphs, charts and diagrams should be drawn and lettered in india ink. Lettering must be large enough to be read after the drawings are reduced to column width (small, simple drawings) or page width (larger, more complex drawings).

Legends — Figure legends should be typed as a group on a separate sheet. They should be separate from the text of the article and from the illustrations.

Tables: Each table should be typed on a separate sheet. Tables should be numbered consecutively and tailored to fit within column width or page width. Table title and table footnotes should be on the same page with the table. Do not show vertical rules in tables.

Permission and Waivers: These should accompany the manuscript when it is submitted for publication. Permission of author and publisher must be obtained for the direct use of material (text, photos, drawings) under copyright that is not your own. Up to one hundred words of prose material usually can be quoted without getting permission, provided the material quoted is not the essence of the complete work. Waivers must also be obtained for the publication of photographs showing persons, unless faces are masked to prevent identification. Waiver forms are available from the editor.



Winter fairyland. Photo taken at Grimsby by Dr. W. Aubrey Crich, DDS, FPSA. The photos included in this article, and on the cover, represent only a very small sampling of the fine work done by this internationally acclaimed Canadian photographer.

Special Feature:

CANADIAN DENTIST HONORED BY AMERICAN PHOTOGRAPHIC SOCIETY

by Diane Charter

World War I bomber pilot, renowned oral surgeon, internationally acclaimed photographer, author and lecturer. These are the careers W. Aubrey Crich of Grimsby, Ontario, has packed into his 79 years.

In August, 1976, he received one of the highest awards in the field of photography — that of a fellowship in the prestigious Photographic Society of America, the largest world-wide organization of its kind. Twenty-two names of photographers from around the world were proposed for this honor, but only 11 were elected to fellowship status, with Dr. Crich being the only Canadian. He is the first and only dentist in Canada to be so honored. In fact, he is one of only 11 Canadians who hold this award. The last PSA fellowship to a Canadian was presented in 1968.

This honor marks more than a quarter-century of achievement in the delicate field of color photography, an avocation which follows a successful dental career and an exciting wartime stint as a bomber pilot.

Born in Brussels, Ontario, Aubrey Crich joined the Royal Naval Air Service in 1917 at the age of 20. Following his training in England and France, he served as a Day Bomber Pilot with the 49th Squadron in France flying a deHavilland 9, a light two-seater, open cockpit, semi-fighter day-time bomber which carried the pilot, an observer and two 112 pound bombs. These were rugged and dangerous missions.

Upon his return to Canada in 1919, he enrolled in dentistry at the Royal College of Dental Surgeons and graduated with the class of 1923. This

class was unique in that it was almost entirely composed of servicemen and that 320 graduated in one class — the largest that has ever graduated from a Canadian dental school.

After a year in practice, Dr. Crich went to the Mayo Clinic in Rochester where, in 1924, he became the first Canadian dentist to receive a Fellowship in Oral Surgery. Following completion of training he returned to Toronto and became associated with the Lockwood Clinic where he set up an oral surgical service with the accent on fundamentals, pathology, differential diagnosis and the value of radiographic evidence. During his years in practice, Dr. Crich was a generous contributor to dental literature. He later left the Lockwood Clinic to establish his own practice in oral surgery.

In 1940, he decided to retire and



Dressed warmly, Dr. Crich photographs the scene of a recent fire during an early winter morning.

bought a fruit farm at Grimsby Beach on the shore of Lake Ontario. A year later he was performing surgery on a part-time basis at the request of patients coming from St. Catharines and the surrounding area. Before long, he sold the farm, bought a house in Grimsby and was back in full time practice. Dr. Crich finally retired in April of 1969.

"Pump Handle Pete", a grey tree frog

Barn Owl nesting in September in a metal cavity in the lift bridge over the Welland Canal.



The budding photographer

Dr. Crich first became interested in color photography as a hobby in 1952. By 1955 he was hooked and joined the Hamilton Color Photographic Club, later serving as its president. Today he is a member of the St. Catharines' and the Toronto Camera Clubs and his work wins medals and awards at major showings around the world. He has



Porcupine tracks to the watering hole

Female praying mantis displaying her wings. This is a sight seldom seen and very rarely photographed.



turned a latter-years avocation into an international reputation for excellence in photography.

In 1964 he became only the second Canadian to rate "five-star exhibitor" in the color division of PSA judging and, in 1968, he won a similar rating for nature photographs. These coveted awards are known as the number 1

Galaxy rating in color pictorial and a Diamond Star in nature.

The National Film Board's centennial publication, "Canada: A Year of the Land", includes three Crich pictures. Dr. Crich has countless medals, cups and ribbons for his salon work. He is especially proud of the Myrtle Walgreen Award he received for the best

color portrait in a New York Salon. This award was for his portrait of a bearded gentleman lighting a long-stemmed curved Dutch pipe.

In total, Dr. Crich has had 1500 acceptances in recognized International Salons in color pictorial and nature categories. He has presented shows, on three different occasions, to the New England Camera Club Conference, held at the University of Massachusetts, Amherst — the largest photographic conference in the world. He has also presented programs at three different conventions of the Photographic Society of America. In addition, Dr. Crich has helped judge 15 International Salons and has lectured extensively throughout Canada and the United States. He is also a prolific author of articles for photographic journals.

A hobby within a hobby

At the present time, Dr. Crich is keenly interested in photographing insects, particularly the fresh water variety. In fact, this area of delicate photography has almost become a hobby within a hobby for him in recent years.

Aubrey Crich is described by those who know him best as a man with an enormous capacity for enjoying life. The citation of his PSA Fellowship certificate reads: "For his unique proficiency in color and nature photography and the complete sharing of his wealth of knowledge through a wide-ranging series of lectures and writings, all happily enlivened and enhanced with gentle and perceptive humor."

What makes a great photographer? This question was put to Dr. Crich during an interview for the July, 1970, issue of the *Mayo Alumnus*. In his answer, Dr. Crich first pointed out that in photography, as in the healing arts, a man must first know his equipment. "Then I'd have to say he must be able to see a picture. Then, if he is at the right place under exactly the right conditions, a kind of circuit is completed. A circuit linking the subject, the camera and — most important — the eye of the photographer."

L'ADC RECONNAIT, A TITRE DE SECTION, L'ASSOCIATION DES PROSTHODONTISTES

Au cours de son assemblée annuelle pour 1976 tenue à Edmonton, le Bureau des gouverneurs de l'Association dentaire canadienne a approuvé une motion qui reconnaît l'Association des prosthodontistes du Canada à titre de section.

A ce titre, l'Association des prosthodontistes prend sa place parmi huit autres sections de spécialisation. Il s'agit de: l'Académie canadienne d'endodontie; l'Académie canadienne de radiologie buccale; l'Académie canadienne de pathologie buccale; l'Académie canadienne de chirurgie buccale; l'Association canadienne des orthodontistes; l'Académie canadienne de pédiodontie; l'Académie canadienne de périodontie; et la Société canadienne des dentistes des services de santé publique.

Les gouverneurs ont également soulevé les points suivants lors de leur assemblée:

L'accréditation des hôpitaux — Le Bureau a recommandé que, conjointement avec les Associations membres de l'ADC, toute la question d'accréditation soit passée en revue dans le but de redéfinir divers rôles et domaines de responsabilité et d'établir un système d'accréditation des services dentaires dans les hôpitaux en mesure de faire face aux besoins de toutes les Associations. Ces dernières sont invitées à soumettre leurs recommandations à cet égard au Conseil exécutif de l'ADC.

Cotisation des membres — Le Bureau signale que la cotisation de membres ordinaires passera de \$65.00 à \$90.00 et celle des membres associés de \$20.00 à \$35.00. Un avis ayant trait à cette augmentation a été émis lors de l'assemblée pour 1975 du Bureau des gouverneurs, tenue à St-John's, Terre-Neuve. C'est au cours de cette assemblée que les Associations membres ont été avisées que l'on s'attendait

à ce que l'augmentation soit approuvée lors de l'Assemblée pour 1976 et elles ont été invitées à porter toutes modifications nécessaires aux règlements provinciaux afin que ceux-ci se conforment à l'augmentation envisagée. On a également signalé que les cotisations nécessaires au financement de l'ADC n'avaient subi aucune augmentation depuis 1968.

Constitution et statuts — Les statuts de l'ADC furent attentivement étudiés lors de l'Assemblée et le Bureau des gouverneurs a recommandé un nombre d'importantes modifications. Ces dernières sont actuellement en voie d'exécution et un compte-rendu à cet égard

sera publié dans un futur numéro du Journal.

Liaison avec l'“American Dental Association” — Le Comité des finances de l'Association dentaire canadienne organise actuellement une réunion avec le Comité des rapports entre les Associations (Inter-Agency Affairs Committee) de l'“American Dental Association”. Cette réunion aura probablement lieu au cours du printemps de 1977, conjointement avec une assemblée du Conseil exécutif de l'ADC, afin que les représentants de l'ADC soient déjà assemblés. On espère que ces réunions seront organisées régulièrement tour à tour par les deux Associations.

Association des chirurgiens dentistes du Québec



Dr. Claude Chicoine
Président-Directeur général



Dr. Clyde Covit
Président du conseil d'administration

Le Conseil d'administration de l'Association des chirurgiens dentistes du Québec, réuni en assemblée régulière, le 30 octobre 1976, a élu ses principaux officiers pour l'année qui vient. Le docteur Claude Chicoine a été élu président de l'Association et le docteur Clyde Covit a été élu président du Conseil d'administration. Les autres officiers élus sont: le docteur Yves Tellier, premier vice-président, le docteur Pierre Dupéré, deuxième vice-président, le docteur Pierre-Paul Prud'homme, trésorier, le docteur Yves Giguère, conseiller et le docteur Mario Beaulieu, conseiller.

LE CEDC ET LE CRD(C) ORGANISENT UN EXAMEN DESTINE AUX SPECIALISTES QUALIFES

Une bourse de FCED de \$1,500 destinée à un professeur d'une faculté dentaire

Le Conseil des examinateurs dentaires canadiens et le Collège royal des dentistes du Canada annoncent l'organisation d'un examen spécial, destiné aux spécialistes qualifiés, non admissibles grâce à leur affiliation au Collège royal, désireux d'obtenir le certificat de spécialiste des CEDC/CRD(C).

L'examen aura sans doute lieu à la fin de l'automne 1977 (probablement au début de décembre) et durera deux jours ou plus, selon le nombre de candidats.

L'examen (écrit et oral) sera orienté vers des domaines cliniques. Les examinateurs, membres (Fellows) du Collège royal, représenteront le Conseil des examinateurs dentaires canadiens.

L'examen ne sera pas répété et comporte un seul droit de reprise. Il s'adresse aux dentistes possédant leur certificat provincial de spécialisation dans un domaine reconnu par l'Association dentaire canadienne ou encore aux praticiens admissibles aux termes du paragraphe 4 des règlements s'appliquant aux certificats de spécialistes du CEDC/CRD(C). Le paragraphe 4 est ainsi conçu:

“Le cas de ceux qui ne sont pas

membre du CRD (C) et qui ne détiennent pas le certificat de spécialisation provincial, et qui sont diplômés des programmes de spécialisation approuvés au Canada ou aux États-Unis, ou qui ont le diplôme d'autres programmes reconnus comme équivalents par le CRD (C), sera étudié par le Comité de vérification du CRD (C) au nom du CEDC. S'ils y sont admissibles, les candidats passeront alors l'examen approprié de spécialisation du CEDC/CRD (C)”.

La réussite de cet examen ne représente nullement l'obtention d'une partie quelconque des conditions requises pour devenir membre (Fellow) du Collège royal.

Les droits d'inscription à cet examen s'élèvent à \$425.00, payables à l'ordre du CEDC; cette somme comprend la délivrance du certificat du CEDC/CRD (C).

Prière de s'adresser au Conseil des examinateurs dentaires canadiens, 100 avenue Bronson, Suite 807, Ottawa, Ontario K1P 6G8, pour obtenir les formules d'inscription et tout renseignement supplémentaire. Dernier délai pour l'inscription: 1er juin 1977.

Le FCED invite la soumission de demandes pour la bourse pour 1977, accordée par la Société Warner-Lambert Canada Limitée à un professeur dentaire. La date limite pour soumettre une demande est le 1er mars 1977.

Selon le Dr James A. Guest, administrateur du fonds, “l'objet de cette bourse est de procurer à un professeur qui enseigne à une faculté dentaire du Canada, l'occasion de perfectionner et d'approfondir ses connaissances dans tout domaine de l'enseignement ou de la recherche qui l'intéresse”.

Les candidats doivent être employés à plein temps dans une faculté dentaire du Canada et posséder un minimum de cinq ans d'expérience dans l'enseignement universitaire.

Le programme d'études doit être nettement défini et sa durée sera d'un minimum d'environ un mois. Les lettres de demande ainsi que la description détaillée du programme proposé doivent être reçues au FCED, suite 205, 44 ouest, avenue Eglinton, Toronto, Ontario M4R 1A1, avant le 1er mars 1977. Ces demandes doivent être accompagnées d'un curriculum vitae ou d'une lettre d'appui du doyen ou d'un autre membre approprié de la faculté, indiquant l'approbation de la période d'études ainsi que les avantages qui pourront en découler pour l'université aussi bien que pour la personne intéressée.

À la fin de la période d'études, le bénéficiaire de la bourse sera tenu d'envoyer au FCED un rapport décrivant ce stage.

Tous les renseignements concernant la bourse peuvent s'obtenir au bureau du doyen des facultés dentaires ou au Fonds canadien d'enseignement dentaire.

Toutes les demandes seront soigneusement étudiées par le Comité consultatif sur le Choix des candidats du FCED et le nom du candidat choisi sera soumis au Conseil des administrateurs.

DEFECTUOSITE DE LA MINUTERIE DANS LE MATERIEL DENTAIRE A RAYONS X

La Direction générale de la protection de la santé a découvert récemment des défauts de minuterie qui survenaient dans les appareils dentaires à rayons X vendus au Canada. Lorsque cette défectuosité est présente, les appareils continuent d'émettre des rayons X sans que le réglage ne l'arrête automatiquement. Pareille défectuosité constitue une infraction aux normes de fonctionnement précisées dans le Règlement sur les dispositifs émettant des radiations, et peut causer une exposition trop prolongée pour le patient surtout si l'opérateur ne se rend pas compte que la minuterie fait défaut et

ne relâche pas l'interrupteur d'exposition.

On recommande à tous les usagers d'appareils dentaires à rayons X de prendre les précautions qui s'imposent. Nous vous saurions gré de bien vouloir nous faire parvenir tous renseignements supplémentaires que vous pourriez avoir sur ce genre d'appareil. Vos observations doivent être adressées au directeur, Bureau de la radioprotection, Direction de l'hygiène du milieu, Direction générale de la protection de la santé, ministère de la Santé nationale et du Bien-être social, Ottawa (Ontario) K1A 1C1.



Bien petite étiquette. Déclaration bien importante.

...qui signale que:

Les laboratoires dentaires ont utilisé l'une des meilleures céramiques au monde pour la fabrication des ponts et couronnes de porcelaine-sur-métal.

La teinte est parfaitement similaire à celle qui apparaît sur le guide de teintes Trubyte® Bioform®. Cette similitude est due au fait que les céramistes qui ont créé les teintes du guide Bioform, ont apporté le *même* soin à la création des teintes pour la porcelaine Biobond.

Les restaurations de porcelaine-sur-métal disposent d'une très grande résistance—et d'une beauté durable qui ont fait de la porcelaine Biobond, un symbole de qualité.



Utilisez votre guide de teintes Trubyte® Bioform®.



Prescrivez "porcelaine Biobond".

DENTSPLY® TRUBYTE®

Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1976 Dentsply International, Inc.
Tous droits réservés.

PREMIER COLLOQUE INTERNATIONAL FRANCOPHONE DE RECHERCHE ODONTOLOGIQUE

Le premier colloque international francophone de recherche odontologique a eu lieu les 6, 7 et 8 octobre dernier, à Rennes. Son but principal était de favoriser les recherches au moyen de la langue française.

Un tel objectif ne manque pas d'ampleur. Il sous-entend au surplus que la recherche n'exclut pas le contexte social, économique des questions dentaires. Il englobe également les sciences de base auxquelles il faut toujours revenir, car les résultats des recherches scientifiques ne sont, en somme que leurs prolongements.

Que le monde dentaire français, uni par la langue française à cette occasion, fasse ressortir, en amicale contrepartie anglophone (ou autre), des valeurs auparavant plus isolées, voilà ce qui devrait soulever l'enthousiasme de nos dentistes canadiens-français, et des confrères québécois qui veulent bien contribuer en français.

Ce que la France a commencé par ce premier colloque est peut-être une voie très importante dans la vie professionnelle française. Les sujets qui y furent traités (et nous en donnerons les résumés dans le journal) indiquent une pensée dentaire très différente, sinon nouvelle, pour les généralistes du Québec. Si, dans nos congrès, on annonce qu'on traitera par exemple de "time & motion" et qu'en même temps un autre conférencier parlera de l' "Activité hyaluronisadique de bactéries anaéro-

bies au cours de parodontolyses chroniques". Passons. . .

Le colloque français portait sur plusieurs sujets du genre, et si nous en donnons des résumés dans ce journal c'est bien sûr pour l'intérêt de ceux qui s'adonnent à la recherche et qui peuvent apporter des éléments susceptibles d'enrichir ou de contribuer à l'édification d'une pensée scientifique.

Si le congrès français s'était limité à cette seule dimension, il risquerait sûrement d'isoler davantage l'ensemble québécois.

Heureusement, on trouvera des résumés plus généraux, encore qu'il s'en dégage un intérêt fortement théorique.

La plus évidente observation que l'on peut faire en marge de ce colloque est que la pensée de France est beaucoup plus orientée à la pathologie que la pensée nord américaine dont nous sommes des tenants fidèles, mais qui nous guide davantage à la clinique.

Si nous voulons participer, comme entité ethnique, au dialogue français mieux vaut le faire d'après nos méthodes d'approche et, de l'unification de toutes les méthodes dialoguées, en sortira des avantages pour tous.

Ce colloque, dit le Professeur Yardin, est un premier pas sur la voie de ce qui doit être pour nous, une "ardente obligation" puisqu'en fin de compte, il s'agit de mieux soigner. A ce titre, il serait souhaitable que l'O.D.Q. entre en scène et structure un mode d'action.

Dr. Robert Lambert

La fluoration réduit de 60% la carie dentaire déclare "santé et bien-être social Canada

Le Ministère de la santé et du bien-être social déclare que la fluoration des eaux domestiques constitue une mesure efficace et sans danger, qui préviendra jusqu'à 60% des caries dentaires.

Dans une brochure d'hygiène dentaire intitulée "Souriez à belles dents", le ministère décrit la fluoration comme étant la mesure la plus efficace et commode dans le domaine de la santé publique pour réduire économiquement et sans danger, la fréquence des maladies dentaires. Près de 500 collectivités canadiennes et environ 8 millions d'habitants profitent aujourd'hui de la protection et des épargnes que procurent les approvisionnements d'eaux fluorées.

La brochure signale que malgré les probabilités selon lesquelles 98% des Canadiens subiront, au cours de leur vie, certains troubles dentaires, les statistiques prouvent que seulement 40% d'entre eux recevront des soins adéquats. Elle souligne également que la protection et la préservation des dents constituent un investissement judicieux qui dure toute la vie.

L'ACIAD nomme son nouvel exécutif

L'Association canadienne des infirmières et assistantes dentaires vient de nommer son Conseil d'administration pour l'exercice 1976-77. Les membres suivants ont été élus: Kerris Franklin, Edmonton, présidente; Marlane Paguin, Richmond, B.C., première vice-présidente; Rosalie Stoss, Montréal, deuxième vice-présidente; Barbara Peterson, Calgary, secrétaire; Elaine Wesley, Lethbridge, trésorière et présidente du Conseil d'accréditation; Elizabeth Purchase, St-Johns', Terre-Neuve, présidente sortante; Jane Faulafer, Vancouver, rédactrice du Journal; et Teresa Senecal, présidente — publicité. Lynn Wilson, Ardrossan, Alta., siège également à titre de représentante au Conseil de la santé de l'Association dentaire canadienne.

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 30 novembre 1976:

<i>Fonds d'actions ordinaires</i>	\$25.779
<i>Fonds à revenu fixe</i>	\$18.250
<i>Fonds avec garantie</i>	\$13.162

L'avoir total (valeur marchande) du régime se montait à \$22,806,135.48.

Pour de plus amples renseignements, veuillez écrire à CDA-sponsored Pension and Insurance Plans, 234 St. George St., Toronto, Ont. M5R 2P2.

THE WATERLOO PRESCHOOL CHILDREN'S DENTICARE STUDY

D. W. Lewis, DDS, DDPH, MScD

S. C. Magid, MA

Toronto

M. E. Jarrett, DDS, DDPH

Waterloo, Ont.

A project was designed to demonstrate the feasibility of providing free dental care to preschool children using private practice facilities, and to collect information which could assist in the development of such a program on a province-wide basis. Complete basic dental care was provided to two samples of randomly selected Waterloo Region children, and preventive dental care was provided to one similar sample, initially at age three and continuing through age five. The Waterloo Regional Health Unit administered the program and also provided some diagnostic and preventive care. Private practitioners were reimbursed on a fee-for-service basis. Very high rates of patient utilization and dentist participation were obtained. Not all practitioners provided the maximum level of services allowed or charged the maximum allowable fees for services provided. There were marked differences in the nature and amount of dental care provided to children of the same age, and individual children's dental treatment needs appeared to vary from year to year. The experiment demonstrated that it is feasible for a regional government agency to administer a private practice preschool children's denticare scheme.

In Ontario, the overall demand for dental care is not high and is unevenly distributed, economically and geographically, within the population and among different age groups. The gap between treatment received and needed is wide. The re-organization of dental health care delivery to provide dental care systematically and equitably to children with little or no out-of-pocket expense to their parents has begun in several Canadian provinces (notably Saskatchewan, Prince Edward Island, Quebec and Nova Scotia), and planning for such programs is underway in others. The Waterloo Time, Cost and Manpower Study of Incremental Dental Care for Preschool Children was designed to test the feasibility and monitor the operation of a children's denticare program administered by a regional government agency with care provided by private dental practitioners on a fee-for-service basis.

The study was initiated by Dr. M. E. Jarrett, Dental Director of the (then) Waterloo County (now Regional) Health Unit. The Regional Municipality of Waterloo is located in southern Ontario approximately 60 miles west of Metropolitan Toronto. The main demographic features of Waterloo relative to the province of Ontario as a whole are its relatively greater urban population and German ethnicity. The dentist-to-population ratio in Waterloo is similar to that in the province (1:2,322 in Waterloo and 1:2,290 in Ontario in 1974). The region has enjoyed an active dental public health preventive and educational program for many years.

Outline of the project

One group of 1,000 three-year-olds was selected to start in the first year of the program (1971, Group 1), and two groups of 500 three-year-olds each were selected to start in the second year (1972, Groups 2 and 3). Children were to remain in the program for three years (basically at ages three, four and five). Complete basic dental care (preventive, diagnostic and restorative) was available to the children in Groups 1 and 2 free of any cost to their parents; the children in Group 3 received free preventive and diagnostic care only. The staff of the Waterloo Health Unit administered the program and provided preventive and diagnostic services to some of the project participants. All other care was provided by private practitioners on a fee-for-service basis. An advisory committee was established by the executive of the Waterloo-Wellington Dental Society to act as liaison between the Health Unit and participating private practitioners on matters pertaining to the project.

Methods

Sampling and contact procedures

Participants were selected from lists of two- and three-year-old children, compiled on the basis of the 1970 and 1971 Provincial Assessment Roles for Waterloo County. The 1971 sample was randomly selected from the list of all children still three years old as of April 1, 1971. The 1972

sample was randomly selected from the list of all children born between August 1968 and September 1969. The County was divided into 15 areas and children were selected from each area in proportion to the number of three-year-olds residing in that area.

Letters describing the project were sent to the parents of children selected to participate in the study. Parents were asked to complete a consent form and mail it to the Health Unit. Letters were also sent to all dentists in the County of Waterloo and the neighbouring County of Wellington inviting them to participate in the incremental dental care program and to complete and return a form indicating their intentions.

Dental services covered and allowable fees

In the first year of operation, only one annual dental examination and one topical fluoride application were funded under the program. After the first year, this was changed to allow for common six-month recall practice. For the majority of children, the actual effect in terms of significantly improved dental health benefits of greater than one annual dental examination and topical fluoride application is not fully known but custom prevailed in the face of uncertainty. Generally only one pair of bitewing radiographs was permitted per year.

In addition to preventive and diagnostic services, children in Groups 1 and 2 received basic restorative treatment free of any charge to their parents. All necessary fillings and extractions were funded under the program as well as stainless steel crowns, space maintainers and pulp treatments. Full mouth radiographs and orthodontic care were specifically excluded. Other services were allowed with the approval of the project's dental administrator. Services covered are believed to include over 90 per cent of the services children generally need.

In the first year of the project, maximum allowable fees were set at the levels specified in the 1969 Ontario Dental Association Fee Guide. After the first year, the 1971 Fee Guide was used. Participating dentists were told that their usual and customary fees should prevail, except that in no case should they exceed those specified in the appropriate fee guide.

Program operation

According to the letters sent to the parents of children selected for participation in the program, the initial examination of each child was to take place at the Health Unit. Following receipt of consent forms, Health Unit personnel contacted parents by telephone (or by letter in the case of those without telephones) in order to make an appointment for an examination at the Unit. Those parents who expressed a desire to take their child directly to their own family dentist were permitted to do so. In other cases appointments were made for examinations by Health Unit staff. Children who were found, upon examination, to have no apparent defects, generally received preventive dental

treatment (prophylaxis and topical fluoride treatment and a dental health lesson) at the Health Unit and were placed on the Unit recall list. Children who required reparative treatment were referred to private dentists. Parents took their children to the dentist of their choice. A list of participating dentists was maintained for parents to choose from if they had no family dentist. Once a child was taken to a private dentist he or she did not normally return to the Health Unit.

Records and analysis

A patient record form was developed for the project. This form was used both as a bill for services and as a source document for keypunching patient data. One copy was to be retained by the treating dentist as an office record while the second was to be sent to the Health Unit where it was processed for payment and retained in a patient file. Dentists were also asked to send in to the Health Unit one set of bitewing radiographs for each patient treated.

Patient record forms were checked by Health Unit personnel and copies were sent to the Biometrics Section of the Division of Clinical Sciences, University of Toronto Faculty of Dentistry, for data processing.

A unique patient identification number was assigned to each participant. One record was compiled for each patient for each year he or she participated. This permitted two types of data analysis: firstly, by group and year; and secondly, by patient. Analysis by group and year involved the examination of differences in the type, frequency and cost of services rendered to patients in each group over the three years of the study, and between groups in each year of the study. Analysis by patient involved the examination of the type, frequency and cost of services rendered to each patient over the entire course of his or her participation in the study. Since differences between the treatment received by male and female children in this study were slight, the data for the sexes were combined. Due to a processing error, data by patient are available for only 1,317 patients in Groups 1 and 2, although it appears that there were 1,322 patients in these groups.

Findings

Participation rates

Patients. — All participants in the first year of the study (Group 1) were to receive complete basic dental care. Responses were initially received from the parents of 850 of the 1,000 children selected for Group 1. Follow-up revealed that of the 150 families who failed to respond, 57 had misplaced or destroyed the letter, 28 had not understood its significance, and 23 could not remember having received it. An additional 42 families had moved without leaving a forwarding address and could not be followed up. A total of 903 consents were finally received from this group.

Response was even better in the second year of the study. This was attributed to the good publicity which the

program received during its first year of operation. Two samples of 500 children each were selected with those in Group 2 to receive complete basic dental care and those in Group 3 to receive diagnostic and preventive care only. Consents were received from the parents of all 500 children in Group 2; 472 consents were obtained on behalf of children in Group 3.

Table 1 describes the patterns of patient participation over the three years of the dental care program. Of the 2,000 children selected for participation in the program, 1,775 (88.8 per cent) appeared for treatment at least once. Approximately two-thirds of those originally selected (or three-quarters of those who participated), appeared consistently in each of the three years of the program.

Dentists — Of the 140 dentists originally contacted, 135 agreed to participate. An additional 32 dentists were added to the list of those willing to participate as new dentists moved into the area. Of the 167 dentists who agreed to participate, 114 actually treated patients in the program.

Dental care provided

Diagnostic and preventive care — Basic diagnostic and preventive dental care was available free of charge to all participants in the program. Patients not requiring referral to a private practitioner for restorative treatment frequently received diagnostic and preventive care at the Health Unit. Some of these remained Health Unit patients and some were subsequently referred to private dentists. Table 2 shows the distribution of Health Unit and private patients in each group and year. A patient who visited a private dentist in a given year was considered to be a private patient, whether or not he or she had also received some diagnostic or preventive treatment at the Health Unit during that year. Since patients did not normally return to the Health Unit after being referred to private dentists, the number of Health Unit patients declined every year.

Examinations — All patients who participated in the dental care program in a given year received at least one dental examination. The mean number of examinations billed per patient in each group and year was — Group 1: Year 1, 1.29; Year 2, 1.37; Year 3, 1.53; Group 2: Year 1, 1.52; Year 2, 1.45; Year 3, 1.23; Group 3: Year 1, 1.50; Year 2, 1.38; Year 3, 1.19. Two dental examinations were billed in some cases in Group 1 Year 1 contrary to the rule that had been established.

Bitewing radiographs — Between 60.9 and 75.3 per cent of the private patients in each group and year had bitewing radiographs taken. The percentage of Health Unit patients having radiographs taken was much smaller — between 0.0 and 37.6 per cent. This can be explained partly by the fact that Health Unit patients were considered, upon examination, to be free of any defects and in many cases radiographs were judged to be unnecessary; and partly by Health Unit personnel cutbacks in 1973 and 1974.

Patterns of patient participation

Table 1

Patient participation	Group 1		Group 2		Group 3		Total	
	N	%	N	%	N	%	N	%
Year 1 only	27	(3.3)	22	(4.4)	27	(6.0)	76	(4.3)
Year 2 only	2	(0.2)	8	(1.6)	6	(1.3)	16	(0.9)
Year 3 only	5	(0.6)	8	(1.6)	17	(3.8)	30	(1.7)
Years 1 and 2	34	(4.1)	26	(5.3)	35	(7.7)	95	(5.4)
Years 1 and 3	62	(7.5)	69	(13.9)	58	(12.8)	189	(10.6)
Years 2 and 3	11	(1.3)	20	(4.0)	20	(4.4)	51	(2.9)
Years 1, 2 and 3	686	(83.0)	342	(69.1)	290	(64.0)	1,318	(74.3)
Total	827	(100)	495	(100)	453	(100)	1,775	(100)

Distribution of health unit and private patients in each group and year

Table 2

Group and year	Health unit patients		Private patients		Total	
	N	%	N	%	N	%
Group 1						
Year 1	286	(35.4)	523	(64.6)	809	(100)
Year 2	169	(23.1)	564	(76.9)	733	(100)
Year 3	48	(6.3)	717	(93.7)	765	(100)
Group 2						
Year 1	257	(56.0)	202	(44.0)	459	(100)
Year 2	81	(20.4)	317	(79.6)	398	(100)
Year 3	76	(17.3)	363	(82.7)	439	(100)
Group 3						
Year 1	258	(62.9)	152	(37.1)	410	(100)
Year 2	122	(34.8)	229	(65.2)	351	(100)
Year 3	78	(20.3)	307	(79.7)	385	(100)

Topical fluoride applications — Between 73.2 and 92.7 per cent of the patients in each group and year had topical fluoride applications (preceded by dental prophylaxis). The original schedule of services covered under the program allowed for one annual topical fluoride application per patient. While this rule was changed in the second year of the study to permit two annual topical fluoride applications per patient, dentists were advised that a second topical fluoride treatment in one year was not to be done routinely but only if required. The mean number of topical fluoride

Distribution of patients receiving diagnostic and preventive care only and patients receiving diagnostic and preventive care and other treatment in Groups 1 and 2 in each year

Table 3

Group and year	Diagnostic and preventive care only		Diagnostic and preventive care and other treatment		Total	
	N	%	N	%	N	%
Group 1						
Year 1	522	(64.5)	287	(35.5)	809	(100)
Year 2	406	(55.4)	327	(44.6)	733	(100)
Year 3	293	(38.3)	472	(61.7)	765	(100)
Group 2						
Year 1	368	(80.2)	91	(19.8)	459	(100)
Year 2	241	(60.6)	157	(39.4)	398	(100)
Year 3	272	(62.0)	167	(38.0)	439	(100)

Number of teeth extracted by group and year

Table 4

No. of teeth extracted	Group 1			Group 2		
	Year 1 %	Year 2 %	Year 3 %	Year 1 %	Year 2 %	Year 3 %
0	97.2	94.1	88.5	97.2	96.7	92.9
1	1.7	2.6	5.5	0.4	1.3	2.3
2	0.6	2.2	3.0	1.1	1.3	2.3
3 +	0.4	1.1	3.0	1.3	0.7	2.5
Total %	100	100	100	100	100	100
Total N	809	733	765	459	398	439
Mean	0.07	0.12	0.24	0.08	0.06	0.18

Total number of teeth extracted over all years of patients' participation in the program

Table 5

Total No. of teeth extracted	Group 1 %	Group 2 %	Total %
0	83.9	90.5	86.3
1	6.8	2.4	5.2
2	4.6	2.6	3.9
3	1.5	1.0	1.3
4	1.2	2.2	1.6
5 +	2.1	1.2	1.7
Total %	100	100	100
Total N	824	493	1,317
Mean	0.40	0.28	0.36

Number of different teeth filled by group and year

Table 6

No. of different teeth filled	Group 1			Group 2		
	Year 1 %	Year 2 %	Year 3 %	Year 1 %	Year 2 %	Year 3 %
0	64.9	57.0	41.3	80.6	61.1	64.2
1	5.4	11.5	12.5	3.5	8.8	8.7
2	6.3	10.6	14.9	3.7	8.3	10.7
3	3.8	6.3	9.0	2.8	6.0	5.3
4	4.3	5.6	8.2	2.6	5.0	3.9
5	3.2	2.5	4.1	1.1	4.0	2.3
6	3.7	2.2	4.6	1.5	1.5	2.5
7	2.0	1.5	2.4	0.9	2.0	0.9
8	2.2	1.6	1.3	1.3	1.5	0.9
9 +	4.1	1.2	1.7	2.0	1.8	0.7
Total %	100	100	100	100	100	100
Total N	809	733	765	459	398	439
Mean	1.60	1.35	1.94	0.80	1.37	1.08

Total number of different teeth filled over all years of patients' participation in the program

Table 7

Total No. of different teeth filled	Group 1 %	Group 2 %	Total %
0	28.6	50.7	36.9
1	8.9	4.5	7.2
2	9.3	8.9	9.2
3	6.6	4.5	5.8
4	5.8	6.7	6.2
5	4.9	4.1	4.6
6-10	23.2	13.6	19.6
11-15	9.3	6.3	8.2
16-20	2.9	0.4	2.0
21 +	0.5	0.4	0.5
Total %	100	100	100
Total N	824	493	1,317
Mean	4.55	2.81	3.90

applications billed per patient by group and year was — Group 1: Year 1, 1.00; Year 2, 0.95; Year 3, 1.07; Group 2: Year 1, 1.26; Year 2, 1.05; Year 3, 0.89; Group 3: Year 1, 1.32; Year 2, 1.14; Year 3, 0.84.

Other treatment — In addition to diagnostic and preventive dental care, basic restorative treatment (including extractions, fillings, stainless steel crowns, space maintainers and pulp treatments) was available free of charge under the program to children in Groups 1 and 2. Table 3 describes

Number of tooth surfaces filled by group and year Table 8

No. of tooth surfaces filled	Group 1			Group 2		
	Year 1 %	Year 2 %	Year 3 %	Year 1 %	Year 2 %	Year 3 %
0	64.9	57.0	41.3	80.6	61.1	64.2
1	4.2	6.4	6.3	3.1	5.5	3.9
2	4.9	8.0	11.0	2.4	6.3	7.5
3	3.1	4.5	4.8	1.5	4.3	2.5
4	3.5	5.3	8.8	3.3	6.3	7.1
5	1.6	3.4	3.1	1.3	3.0	1.8
6-10	8.7	9.3	16.7	3.5	8.3	8.9
11-15	5.3	3.7	5.9	2.6	3.0	3.0
16-20	1.5	2.3	2.0	1.3	1.0	1.1
21+	2.3	0.0	0.2	0.4	1.3	0.0
Total %	100	100	100	100	100	100
Total N	809	733	765	459	398	439
Mean	2.78	2.31	3.36	1.28	2.22	1.89

the percentage of patients in Groups 1 and 2 who received treatment in addition to diagnostic and preventive care in each year of the study. (No record was kept of restorative treatment obtained by patients in Group 3 at their parents' expense.)

Tables 4 to 9 describe the treatment received by children in Groups 1 and 2 in terms of teeth extracted and teeth and tooth surfaces filled.

Very few children required extractions — less than 15 per cent of the patients in Groups 1 and 2 had any teeth extracted. For children in both groups, the largest number of extractions occurred in the final year of the program.

Only 35.1 per cent of the patients in Group 1 Year 1, and 19.4 per cent of those in Group 2 Year 1 required fillings. A larger percentage of the children in both groups required fillings in the next two years. By the end of the study, however, 28.6 per cent of the patients in Group 1 and 50.7 per cent of those in Group 2 had still not required any fillings. Over the course of the study, the mean number of teeth filled for the patients in Group 1 was 4.55 and for patients in Group 2, 2.81; the mean number of tooth surfaces filled was 7.88 for patients in Group 1 and 4.65 for patients in Group 2.

Use of dental manpower

Number of appointments — The number of dental appointments for each child participating in the study (per year, and over the whole course of his or her participation in the incremental dental care program) was related to the amount of diagnostic and preventive care and other treatment which the child received. Table 10 shows the number of appoint-

Total number of tooth surfaces filled over all years of patients' participation in the program Table 9

Total No. of tooth surfaces filled	Group 1 %	Group 2 %	Total %
0	28.6	50.7	36.9
1	5.2	2.4	4.2
2	7.5	6.7	7.2
3	4.0	2.8	3.6
4	6.6	4.7	5.8
5	3.3	3.4	3.3
6-10	14.2	12.8	13.7
11-15	11.4	5.9	9.3
16-20	9.5	5.3	7.9
21+	9.7	5.3	8.0
Total %	100	100	100
Total N	824	493	1,317
Mean	7.88	4.65	6.67

ments in each group and year for patients receiving basic diagnostic and preventive care only and for those receiving treatment in addition to basic care. Patients receiving diagnostic and preventive care had means of between 1.30 and 1.61 appointments per year; patients also receiving other treatment had means of between 2.99 and 3.89 appointments per year.

Table 11 shows the distribution of the total number of appointments over the course of the entire program for patients in each group. Patients in Group 1 had the highest mean number of appointments (6.73). Approximately 15 per cent of those in Group 1 had between one and three appointments; 40 per cent had between four and six appointments; and 45 per cent had seven or more appointments over the course of their participation in the program. In Group 2, 25 per cent of the patients had one to three appointments; 50 per cent had four to six appointments; and 25 per cent had seven or more appointments. The mean number of appointments per patient was 5.37. In Group 3, 43 per cent had one to three appointments; 53 per cent had four to six appointments; and only 4 per cent had seven or more appointments. The mean was 3.73 appointments per patient over the entire period of the program.

Chair-time — Dentists indicated the amount of chair-time devoted to each patient by checking the appropriate 15-minute time interval (from "1 to 15" to "91 to 105") or "More than 105" minutes on the patient record form. The fact that the last category, "More than 105" minutes, had no defined upper limit made calculation of mean chair-time problematic. The mean was calculated using the midpoint of each time interval, considering "More than 105" as a

Distribution of number of appointments of patients receiving diagnostic and preventive care only and patients receiving diagnostic and preventive care and other treatment by group and year

Table 10

Group and year	Diagnostic and preventive care only						Diagnostic and preventive care and other treatment					
	No. of appointments			Total	Mean	No. of appointments			Total	Mean		
	1	2	3+			1	2	3+				
Group 1	%	%	%	N	%		%	%	%	N	%	
Year 1	63.4	29.9	6.7	522	100	1.44	2.1	18.1	79.8	287	100	3.89
Year 2	64.3	31.8	3.9	406	100	1.40	7.6	28.4	63.9	327	100	3.21
Year 3	51.9	39.2	8.9	293	100	1.60	8.3	24.8	66.9	472	100	3.41
Group 2												
Year 1	45.9	49.5	4.6	368	100	1.59	5.5	25.3	69.2	91	100	3.53
Year 2	46.1	48.1	5.8	241	100	1.61	8.3	28.0	63.7	157	100	3.33
Year 3	76.1	22.4	1.5	272	100	1.26	11.4	30.5	58.1	167	100	2.99
Group 3												
Year 1	46.8	48.5	4.6	410	100	1.59						
Year 2	58.1	32.8	9.1	351	100	1.54						
Year 3	73.2	24.2	2.6	385	100	1.30						

Mean cost for patients receiving diagnostic and preventive care only and patients receiving diagnostic and preventive care and other treatment by group and year

Table 12

Group and year	Mean cost		
	Diagnostic and preventive care only	Diagnostic and preventive care and other treatment	Total
Group 1	\$	\$	\$
Year 1	14.32	62.08	31.26
Year 2	14.88	55.20	32.87
Year 3	17.68	63.81	46.14
Group 2			
Year 1	17.96	64.31	27.15
Year 2	16.94	57.59	32.98
Year 3	13.26	57.81	30.21
Group 3			
Year 1	18.22	—	18.22
Year 2	16.69	—	16.69
Year 3	14.43	—	14.43

Total number of appointments over all years of patients' participation in the program

Table 11

Total No. of appointments	Group 1 %	Group 2 %	Group 3 %
1	2.2	3.2	8.2
2	3.8	7.9	11.9
3	8.7	13.6	23.2
4	10.1	14.0	25.8
5	15.4	23.7	22.5
6	14.3	12.2	4.6
7	13.0	7.9	2.6
8	7.4	4.9	0.9
9+	25.1	12.6	0.2
Total %	100	100	100
Total N	824	493	453
Mean	6.73	5.37	3.73

15-minute interval (106 to 120 minutes). Mean chair-time per year ranged from 17.10 to 26.55 minutes for patients receiving diagnostic and preventive care only and from 67.35 to 76.35 minutes for patients receiving treatment in addition to basic diagnostic and preventive care.

Cost

Table 12 shows the mean cost of dental services rendered to patients receiving diagnostic and preventive care only and to those also receiving other treatment in each group and year. The cost per year of providing diagnostic and preventive dental services ranged from \$13.26 to \$18.22 per patient; the cost per year of providing complete basic dental care ranged from \$55.20 to \$64.31 per patient. Over the entire course of the project the mean cost of dental services for patients in Group 1 was \$102.46; in Group 2, \$78.38; and in Group 3, \$41.69. These figures reflect the lower level of treatment of patients in Group 2 compared with those in Group 1 and the fact that more limited services were available to Group 3 patients.

The total cost of providing dental services to patients in the project was \$142,414. This would have been greater if all participating dentists had charged the maximum allowable fee for all services. Actual costs in each group and year were between 8 and 22 per cent lower than they would have been had the maximum fees been charged in all cases.

Fees for dental services have risen markedly in recent years. The fees charged by the dentists who participated in the incremental dental care program were based mainly on the 1971 Ontario Dental Association Fee Guide. If costs are calculated using the 1975 Fee Guide, the total cost of the dental services provided under the program would be \$238,843. If it is assumed that the actual cost would be 8 to 22 per cent lower than this, the total cost would be between \$195,773 and \$221,150. This is between 38 and 55 per cent higher than the actual total cost of services provided under this project.

In addition to costs for dental services, a total of \$70,586 was spent on administration and research over the course of the project.

Discussion

Participation rates

The Waterloo program was remarkable for extremely high rates of both patient (parent) and dentist acceptance and participation. These can be partially attributed to the work of the Health Unit staff who made every effort to ensure that the largest possible number of children eligible for care under the plan actually received it. A children's denticare plan which did not provide the considerable resources necessary to draw children into a dental care program and monitor their participation would not be expected to attain a patient utilization rate as high as that

which was obtained in the Waterloo project. On the other hand, a majority of the parents involved apparently responded without extra encouragement to the original letter enlisting their co-operation.

Level of dental services provided

Variations were noted in the amount of all types of dental services provided to the children participating in the program. Three factors influencing these variations are suggested. One factor is patients' participation in the program. Children who appeared at regular intervals over the three years of the program received a different pattern of care than those who appeared infrequently and sporadically.

A second factor influencing the level of dental services provided is differing practices among dentists. Some dentists provided much more frequent and comprehensive diagnostic and preventive services than others. (Individual dentists probably also differed in the extent to which they provided reparative services and in the nature of reparative services provided in given situations.) The frequency with which dentists provided diagnostic and preventive services was probably influenced by patient needs to a greater extent for some dentists than for others who were more inclined to provide services routinely to all their patients. Similarly, some dentists were probably influenced more than others by the rules limiting the services paid for under the plan although on the whole these rules seem to have had relatively little effect on the private practitioners who participated in the program probably because they were neither strictly enforced nor as clear as they might have been.

Thirdly, the level of dental services provided is influenced by the rate of dental disease attack. (The level of dental disease attack is, in turn, influenced by other factors such as diet, oral hygiene and exposure to fluoridated water. At the time of their initial appointment under the incremental dental care program, 14.1 per cent of the children in Groups 1 and 2 were residing in areas with fluoridated water.) The patient record form developed for the Waterloo project provided tooth diagrams for the recording of dental examination results. If carefully completed, these diagrams would have permitted the researchers to ascertain the dental health status of patients entering and continuing in the program, and to relate treatment provided to treatment required. Unfortunately, the diagrams were not satisfactorily completed and no record of the level of dental disease attack in the sample population is available.

The findings of the study suggest that the dental treatment needs of three- to five-year-old children are uneven from year to year. A pattern of high need for treatment in the initial year, followed by decreased need for treatment in subsequent, maintenance years, which would be expected in an incremental dental care program for older children in whom initial care needs would be relatively higher, was not found in this study.

An unexpected and unexplained finding was the apparent existence of differences in the levels of need for restorative

treatment on the part of patients in Groups 1 and 2. While patients in Group 1 did tend to be slightly older than patients in Group 2, this did not appear to explain the differences between the two groups.

It is interesting to note that not all participating dentists routinely provided all diagnostic and preventive services with the frequency permitted under the plan. The findings of the study suggest that, in the judgement of some dentists, even once yearly radiographs are unnecessary for some young children (perhaps those with so-called "spaced" dentitions among others). Similarly, bi-annual examinations and topical fluoride applications were not provided routinely to all patients by all participating dentists. (Twice yearly topical fluoride applications were discouraged but allowed.) It is also noteworthy that not all participating dentists charged the maximum allowable fee for each item of service rendered, particularly since the Fee Guide used in any given year was two to three calendar years behind the current year's Fee Guide.

Conclusion

The Waterloo incremental dental care project demonstrated that it is feasible for a regional government agency (such as the dental division of a public health unit) to administer a private practice children's denticare plan. The availability of adequate resources in terms of administrative personnel, and clear definition of the roles of the private

practitioners and the agency involved are essential to the smooth functioning of such a scheme. These factors would be even more crucial if the scheme were implemented on a larger scale.

This study provided statistical and administrative information of great potential value to dental care planners. It also raised some puzzling questions about varying treatment needs, standards and costs. Some of these questions will be explored more fully in a later publication, since space permits only part of the project's final report findings to be published here.¹

Dr. Lewis is professor and chairman, Department of Community Dentistry, Faculty of Dentistry, University of Toronto, 124 Edward St., Toronto M5G 1G6.

Ms. Magid is research assistant to the Dental Health Care Services Research Unit, Faculty of Dentistry, University of Toronto.

Dr. Jarrett was dental director of the Waterloo Regional Health Unit. He died just two months before the completion of this four-year project.

This project was supported in full by Demonstration Model Grant DM 22 of the Ontario Ministry of Health.

1 Lewis, D. W., Magid, S. C. and Jarrett, M. E. The Waterloo Time, Cost and Manpower Study of Incremental Dental Care for Pre-school Children, Waterloo Regional Health Unit, Kitchener, Ontario, August, 1975.

KARIDIUM



**For the individual
systemic control
of dental caries**

Literature, dosage sheet on request.

PROFESSIONAL PHARMACEUTICAL CORP.
2795 BATES ROAD, MONTREAL 251, QUEBEC • (514) 739-3633

**WHY NOT JOIN US? ...
IN COPENHAGEN,
DENMARK
FOR:**

**7th ICOB
March 28-30, 1977**

**55th IADR
March 31-April 3, 1977**

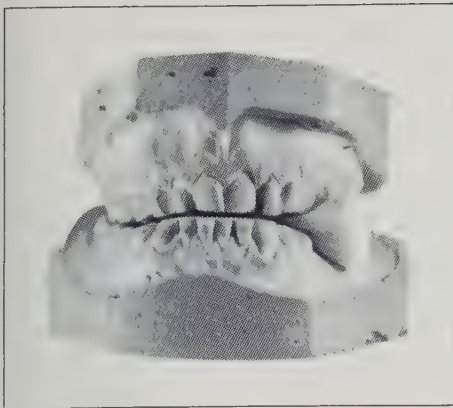
The Organizing Committee extends this invitation to all Canadian Dentists and interested Scientists to attend the Meetings.

An interesting Scientific Programme is offered Plus extension tours to:— Russia, Morocco and England.

For the colour brochure containing all further information and reservations please contact:

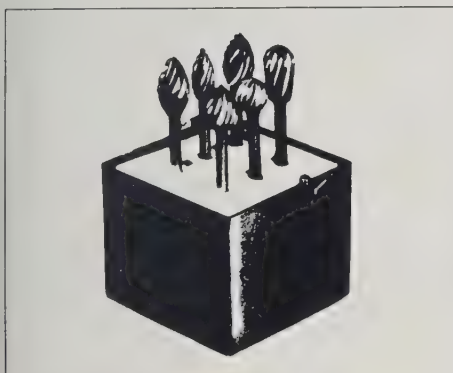
LAWSON, McKAY TOURS LTD.
11 Adelaide St. W., Suite 903,
Toronto, Ontario, M5H 1L9. Tel: (416) 364-0622

New Products



SURGIBLOCKS FOR AFTER EXTRACTIONS

A preformed, oval sponge suitable for one or two teeth extractions. No folding necessary. Will not open when patient moves his jaw. No bulky overlap in the oral cavity nor unsightly exposure on buccal side. Provides bulk where needed without discomfort to patient. Permits free movement of tongue and will not cause gagging. Requires only a single unit where usually 2 or more conventional exodontia sponges are being used, hence more economical. Packed in a box of 1000
Available from WEIL ...



TUNSTEL BURS FOR DENTURE ADJUSTMENT AND ORAL SURGERY

Made of special Tungsten Steel with self-cleaning flutes, these unique burs work smoothly on ALL types of plastic denture material whatever their chemical composition. Their razor-like sharpness is held five to ten times longer than ordinary vulcanite burs without bothersome gumming and clogging. The available shapes are suitable for carving dentures selectively and delicately, scar for rebasing or trimming baseplates at the chair. Tunstel Burs are supplied in a handy six-piece set containing 2 large flames, 1 each small flame, bud, pear, round or any other selection.
Available from WEIL ...

CLINICAL ASPECTS AND TREATMENT OF CYSTS OF THE JAWS by Prof. Herbert Harnisch, Dr. med. dent.

Fine radiographs of cysts of the jaws are always appreciated by Dental Students and Dental Surgeons. Often these cysts are discovered as change findings in the course of routine examination. The diagnosis of cysts, above all in proximity to the maxillary sinus, can present problems for even the experienced practitioner. There is a considerable variety of operative procedures, especially for the anterior region. All important questions and techniques are given detailed consideration in this book. The surgical treatment of many periapical periodontal cysts and dentigerous cysts can be undertaken by the Dentist in his own practice. The technical aspects of these procedures are explained meticulously with the aid of numerous diagrams and illustrations. This book will provide clear answers to the manifold questions posed by cystic lesions of the jaws. An important condition of oral pathology is here illuminated in all its aspects by means of pictures of exceptional quality.

140 pp with 449 illustrations, partly in series, 17.5 x 24.5 cm format, linen bound and golf-stamped with protective cover and slip-case.
Available from WEIL ...

DROPSIN FLUID DENTINE



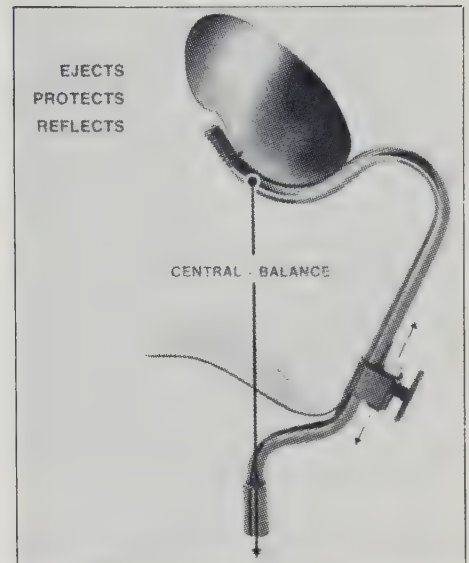
DROPSIN is a compound of minerals selected for protective and adhesive properties. Its main components are zinc oxide, calcium hydroxide, aluminium hydroxide, magnesium oxide, etc.

DROPSIN Powder and Liquid are mixed to creamy consistency and flown into the cavity like paint, by means of an explorer, excavator, or small burnisher. It adheres to tooth structure instantly on contact, even with moisture present.

DROPSIN sets hard enough for packing amalgam in one to one-and-a-half minutes. NO STICKING to instruments. If margins become accidentally covered by the mix, cleaning them will not cause unintentional removal of the base.

EASY HANDLING combines with greatest economy.

A BIOLOGICALLY HARMONIOUS PROTECTION and Leakproof Structural Base in ONE unique product. Available from WEIL.



SVEDOPTER, THE OPTICAL SALIVA EJECTOR

Performs three functions simultaneously. It EJECTS water, saliva and air. PROTECTS the tongue and keeps it out of the operating field. REFLECTS the overhead light to the working area. Fits all patients, adult and children as the mirror blades are interchangeable, with three sizes in each kit. A correctly formed, adjustable chin-rest allows the instrument to be fitted to any comfortable position. The latest model will work on either the regular saliva ejector outlet or any vacuum suction equipment (Aspirator). The spring holding the mirror blades is completely enclosed to avoid irritating the floor of the mouth.
Available from WEIL ...

ELECTROSURGERY IN THE DENTAL PRACTICE

by Prof. F. Schoen, Dr. med., Dr. med.dent.

Electrosurgery can be a very successful and practically indispensable aid in dental practice. The author explains precisely how in this book.

The detailed illustration of the technique, as well as the different types of current, and the subsequent indications, make the methods comprehensible. The varied possibilities for using electrosurgery help to show that the far-reaching role of periodontology is being utilized more than ever in modern daily practice. Consequently, one comes a considerable step nearer to the goal of a therapeutic entity.

The book gives an extensive survey, and acquaints one with the methods and different possibilities for use. It should be used in every modern practice.

92 pages, 61 single-color and 50 multi-colored illustrations, size 17 x 24 cm, cellophane-covered cardboard binding.
Available from WEIL ...

 **WEIL**
DENTAL SUPPLIES LIMITED

18 Grenville Street, Toronto, Ont. M4Y 1A4 (416) 925-5164

CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE.

Direct advertising copy to:
Classified Advertising Dept., Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6.

CLASSIFIED ADVERTISING RATES

(Per Insertion Per Issue):

Minimum (50 words or less)	\$15.00
Each additional word	.30
Service charge for C.D.A. Box No.	2.00

DISPLAY CLASSIFIED ADVERTISING RATES:

Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

ASSOCIATESHIP AVAILABLE

BRITISH COLUMBIA — Abbotsford. Dynamic young dental group requires 2 associates. Experience preferred but not essential. Excellent opportunity with an option for full participation if compatible. Present practice includes a high ratio of crown and bridge and orthodontics. Located in the heart of the Fraser Valley, only 40 minutes from downtown Vancouver in a rapidly growing community. Close to skiing, fishing, hunting and boating. Address all enquiries to Dr. A. R. Shearer, 401-2151 McCallum Rd., Abbotsford, B.C. Phone: 853-6441 Office, 853-1680 Res.

BRITISH COLUMBIA — Burnaby, Vancouver. Associate required for group practice in all phases of general dentistry. Modern office and equipment, and excellent working conditions. Please reply to CDA Box Number 1651.

BRITISH COLUMBIA — Terrace. Short term associateships (semi-satellite practice) to supplement beginning practice income or just for a change of pace. One hour jet service from Vancouver. As little as a week per trip, as often as you wish. Guaranteed patient load and income. Contact: Dr. Talarico, 10 - 4546 Park Ave., Terrace, B.C. Phone: (604) 635-7873.

BRITISH COLUMBIA — Vancouver. Associate required. Dentist required to associate with firmly established Group Practice located in south Vancouver (five dentists). All phases of dentistry with keen interest in preventive dentistry. Fully equipped operatory. More detailed information supplied on request. Please write to: Mrs. Phyllis Franken, Camgara Dental Group, 7547 Cambie Street, Vancouver, B.C. V6P 3H9. Phone: (604) 325-8232.

ALBERTA — Edmonton. Group of 4 dentists in a preventive oriented practice require an associate. Downtown location and nice environment. Please reply to: Dr. Ken A. Hart, #401 10080 Jasper Ave., Edmonton, Alta. T5J 1V9. Phone: (403) 423-2405.

ONTARIO — Regional Niagara. Expanding group practice requires full-time or part-time Associates and Specialists. General dentistry with opportunity to sub-specialize. Ergonomic equipment, multi-function auxiliaries, and efficient design to let you concentrate on dentistry and prevention. Salary or commission leading to partnership. Apply in confidence to CDA Box Number 1634.

ONTARIO — Windsor. Associate needed. Modern preventive oriented practice. Hygienists, denture therapists, lab technician on premises. Newly equipped for 4 handed, sit down dentistry. Contact: Joel Kaye, 700 Tecumseh Bldg. E., Windsor, Ont. Phone: (519) 258-5912.

OFFICES AND PRACTICES

BRITISH COLUMBIA — Burns Lake. Dentist wanted to practise in the Village of Burns Lake in northern British Columbia. Office space is available in a new Medical-Dental Building, constructed June 1976. There would be room for one or two dentists in the building. It is located directly across from the Hospital. The doctors, presently in the building, would be willing to provide anesthetic services for the dentists, either in the clinical or the hospital. This is an ideal opportunity for a young dentist in an expanding town, in one of the most beautiful recreational areas in British Columbia. Contact: Cotobe Management and Professional Services, P.O. Box 167, Burns Lake, B.C. V0J 1E0.

BRITISH COLUMBIA — Vancouver Island. Dentist required. The Village of Lake Cowichan, Vancouver Island, requires a dentist to establish a practice in a new building nearing completion in the main business area of the village. Area population 7,500, village population 2,500, 90% on dental plan, steady, high payroll area. For further details write: Erickson-Neiser Development, Box 761, Lake Cowichan, B.C. V0R 2G0, or phone: 749-3855 or 749-6145.

BRITISH COLUMBIA — Victoria. New Victoria Medical Dental Building. Attractive rates and bonus. Lease option to purchase your office operatory. Excellent location and parking. % Dr. Graham Pettapiece, #11 - 1120 Yates St., Victoria, B.C. Phone: 385-7511.

ALBERTA — Calgary. Well established two-man practice. Ultra modern seven-operatory office in new professional building. Excellent location. Write: Box 10, Suite 23, R.R. 2, Calgary, Alta. T2P 2G5.

ALBERTA — Calgary. For Sale. Well established general dental practice (15 years). Low overhead, price very reasonable. One operatory fully Ritter equipped with x-ray and lab — room for second. Situated close to city centre in Medical-Dental Building. Waiting room shared with physician. Present owner retiring. Please reply to CDA Box Number 1648.

ALBERTA — Calgary. High gross general family practice on main artery. Five operatories with all the appropriate support rooms. Would also like to sell the small building the office is housed in. Very reasonably priced either way. Phone: (403) 278-1415 or write: Branitt Holdings Ltd., 239 Parkside Cres. S.E., Calgary, Alta. T2J 4J3.

ALBERTA — Whitecourt. High gross heavily booked practice in the center of sportsman or golfers paradise. Fully equipped with three operatories, lab and private office. Owner returning to specialty. Well trained staff prepared to stay on. Beautiful modern private home can be included in negotiating terms if desired. Call or write: Dr. D. G. Tarry, Box 448, Whitecourt, Alta. T0E 2L0. Phone (403) 778-3831.

MANITOBA — Winnipeg. For sale. Well established general dentistry practice in suburban Winnipeg. Located in small shopping centre, 900 sq. ft. office space, modern decor. Webber and Dental-Eze equipment in all three fully equipped operatories. For further information reply to CDA Box Number 1654.

ONTARIO — Brampton. Dental office for rent. New Medical-Dental building conveniently located opposite the hospital. Will assist with partitioning. Phone: 451-5802 or 451-2024.

ONTARIO — Cannington. Golden opportunity awaits any dentist setting up practice in Cannington, 70 miles north east of Toronto. Rapidly developing small town of 1,500. Local hospital privileges. New medical center with spacious fully serviced dental suite. Present part-time dentist leaving to concentrate on his city practice but might sell some equipment. Reply to Box 370, Cannington, Ontario L0E 1E0. Phone: (705) 432-2569.

ONTARIO — Thunder Bay (Port Arthur). Established highly successful general practice for sale. Very high net income, owner retiring early for health reasons. 650 sq. ft., 2 Ritter operatories, adaptable for 3 operatories and four-handed dentistry. Solid patient flow to base expansion. Contact: Roy Brown, Roi Management Consultants, Mississauga, Ont. Phone: (416) 278-4145.

ONTARIO — Tilbury. Established office. Four operatories, small lab, dark room, waiting room. Room for expansion. Serving area of 20,000. Sale — Lease — or Associate. Contact: A. C. Sylvestre, 28 Queen St. N., Tilbury, Ont. Phone: (1) 519-682-2672.

ONTARIO — Tillsonburg. Active family practice for sale. Two fully equipped operatories in self contained building. Lease — \$250 per month. Low cash outlay. Available next spring. Contact: Dr. G. D. Higgins, 9 Hyman St., Tillsonburg, Ont. N4G 2C3.

ONTARIO — Toronto. Office space available for a dentist in a medical building in Toronto. Phone: (416) 537-7354.

ONTARIO — Toronto. Office for lease in Ajax, consisting of reception room, business office, x-ray room, laboratory, three operatories with plumbing, leadlined walls, 600 sq. ft. Alternatively, the office could be fully equipped and the dentist could associate with a minimum salary plus bonuses, plus option to buy. Reply to: Dr. Hing, 440 Brown's Line, Ajax, Ont. Phone: 259-6597 or 244-8234.

ONTARIO — Weston. Dental office for rent. Consists of two operating rooms, laboratory and darkroom, reception area, waiting room and private office. All plumbing and electric wiring are present. Fluorescent lighting has been installed. Area approximately 500 sq. ft. Rent \$250 monthly. Contact: Dr. W. K. Cameron, 2315 Weston Rd., Weston, Ont.

ONTARIO — Windsor. Established office. Four operatories, small lab, dark room, waiting room. Center of a growing new area. Sale — Lease — or Associate arrangement. Home (four bedroom, modern) also available. Contact: P. J. Courey, 1490 Cabana Rd., Windsor, Ont. Phone: (1) 519-258-5912.

QUEBEC — Banlieue de Montréal. Bureau comprenant deux salles opératoires toutes équipées à vendre (prix dérisoire). La clientèle remonte à plus de 75 ans de pratique. Réussite assurée au départ. (514) 773-9343 ou 772-5142.

QUEBEC — Montréal. Cabinets dentaires disponibles, centre ouest, pratique de groupe avec possibilités d'association. Dr. C. Vachon, 1464, rue crescent, Montréal, Québec H3G 2B6.

QUEBEC — Montreal (Snowdon Area). Sublet. Bright corner office, six windows, air-conditioned. Two operatories, fully equipped, one with Dental-Eze chair, lab, private office, reception area, waiting room with eight chairs. Recently painted. Available June 1977, or earlier, if desired. Please reply to CDA Box Number 1655.

QUEBEC — Montréal (Ville Saint-Laurent). A louer. Centre dentaire. Deux locaux — quatre cliniques avec ou sans équipement — orthopantomographe. Téléphonez à 336-6464.

NEW YORK — Albany area. General practice for sale. Brick home-office in growing suburb on corner lot. Three bedroom home with private backyard. Fully equipped two operator, three-year-old office. 1975 gross \$50,000. Cost \$85,000 firm. Owner joining V.A. for specialty training. Phone evenings: (518) 477-8919.

OPPORTUNITIES AVAILABLE

BRITISH COLUMBIA — Vancouver. Pedodontist wanted. Opportunity available for pedodontist to join established practice in Vancouver. Associateship leading to partnership. Preventive oriented practice. Contact: Dr. Richard B. Kramer, Suite 708, 2525 Willow St., Vancouver, B.C. Phone: (604) 873-3501.

BRITISH COLUMBIA — Vancouver East Burnaby Area. Hygienist required. Prevention orientated. Pleasant office. Please write stating qualifications. Reply to CDA Box Number 1649.

ALBERTA — Oyen. Dentist wanted to practise in south-central Alberta farming and ranching town, population 1200, trading population 5000. Practice located in district-owned and operated medical-dental clinic which forms part of medical-dental complex built in 1970. Clinic air-conditioned and fully equipped with all major dental equipment. Dentist need only supply hand tools and supplies. Excellent opportunity for new graduate or established dentist wishing to relocate. New 3-bedroom home available for rent to resident dentist. Rent of clinic and home extremely nominal. Further enquiries to: Big Country Medical-Dental Centre, Box 293, Oyen, Alta. T0J 2J0. Race, Colour or Creed of No Importance.

ALBERTA — Wetaskiwin. Dental Hygienist required immediately for the Wetoka Health Unit, located 35 miles south of Edmonton. Primary stress of education and nutrition. Salary scale: \$918 - \$1307/month plus fringe benefits, depending on experience. Contact: Dr. J. MacQuarrie, MHO, Wetoka Health Unit, 5007 - 51 Ave., Wetaskiwin, Alta. Phone: (403) 352-3337.

ONTARIO — Ottawa. Dental Hygienist urgently required for full time position. Well established preventive group practice in downtown Ottawa. Write: Dr. D. H. Reid, 130 Albert St., Suite 500, Ottawa, Ont. K1P 5G4.

ONTARIO — Windsor. Dental Hygienist, full-time progressive, modern, preventive practice. Starting salary \$1,200 to \$1,400 per month. Reply to CDA Box Number 1650.

ONTARIO — Sudbury. Cambrian College of applied Arts and Technology requires a dentist for Dental Auxiliary Programs. A challenging opportunity is available to teach and co-ordinate the Dental Assistant Program presently in operation and a Preventive Dental Assistant program scheduled to begin in September 1977. Applicants must have or be able to obtain a license to practise in the Province of Ontario. Teaching and experience in organizing programs in the field of Dental Health preferred but not essential. Duties to commence approximately June 1977. Salary is negotiable. Applications with resume should be forwarded to: Director of Personnel, Cambrian College of Applied Arts and Technology, 1400 Barrydowne Rd., Station "A", Sudbury, Ont. P3A 3V8.

QUEBEC — Montreal. Large progressive quality practice. Cote des Neiges area. Experienced operators with clientele preferred. Phone: 739-8130 or 738-8441.

ASSOCIATESHIP WANTED

BRITISH COLUMBIA — Vancouver. Preventive oriented associateship desired by 1972 Canadian graduate. Experience in total patient care, chiefly involving crown and bridge, endodontics and pedodontics. A well established busy group practice with high quality care is preferred. Available starting January 1978. Reply to CDA Box Number 1656.

OPPORTUNITIES WANTED

VANCOUVER — Toronto. Practice wanted. Experienced edgewise orthodontist desires association leading to partnership or purchase of existing quality practice. Please reply to CDA Box Number 1652.

EQUIPMENT FOR SALE

QUEBEC — Montreal. For sale. Quantiflex MDM Nitrous Oxide Equipment: 1 Quantiflex MDM Flowmeter Head; 2 Wall Mounts; 2 Quick combination Connect Outlet Stations; 1 Sm. Cylinder Yoke Block; Breathing Tubes and Bag; Child and Adult size Nasal Inhalers. For information apply to CDA Box Number 1653, or phone: (514) 861-2123.

MISCELLANEOUS

ORTHODONTIC DENTAL SEMINARS and CARIBOO-MONASHEE MOUNTAINS of B.C. Three one-week seminars, all inclusive. Tentative dates in February and March. For further information contact: "Deep Powder Seminars", 18 Mary Walk. Elliot Lake, Ontario, Canada P5A 2A1.

CURLING BONSPIEL — Tenth Annual Western Canada Dental Bonspiel CALGARY — March 17, 18 & 19, 1977. Limited entry — Apply now! Coincides with "Western Canada Mid-Winter Convention". Speaker: Dr. Burt Sparrow — Surgery. Information and entry: Dr. Ric. Taillon, 202 - 1711 - 4th St. S.W., Calgary, Alta. T2S 1V8.

DENTISTS — CANADA

Applications are invited from graduate dentists to participate in the Province of Manitoba's Department of Health and Social Development's preventive-treatment programs. The programs consist of comprehensive treatment services combined with preventive education and are provided in the main through the Manitoba Children's Dental Program. Services include examinations, radiographs, prophylaxes, restorations, stainless steel crowns, endodontics, oral hygiene evaluation and other related services. Services are provided through a team approach, by dentists, dental nurses (New Zealand type), and support staff of dental assistants in both permanent and temporary dental clinics located for the most part in elementary schools.

Positions are located outside of Winnipeg; travel is involved. Modern dental equipment, support staff, hand instruments, materials, uniforms, etc., used in the clinics are provided by the Department. Travelling and living accommodation away from a home base are provided. Full time staff are entitled to regular Civil Service fringe benefits.

QUALIFICATIONS: Upon employment, registration and licensure to practise dentistry in Manitoba. Some experience in private or public health dentistry required. Postgraduate training in dental public health or equivalent preferred for Regional Dental Officer position.

SALARY: Dependent on qualifications
Dentist 2 (Clinical Dentist) \$24,618–\$30,800 per annum
Dentist 3 (Regional Dental Officer)
\$25,733–\$32,238 per annum

APPLY IN WRITING REFERRING TO NO. FD 005 TO:

Civil Service Commission
Province of Manitoba
904 - 155 Carlton Street
Winnipeg, Manitoba R3C 3H8
Canada

THE UNIVERSITY OF BRITISH COLUMBIA FACULTY OF DENTISTRY

NOTICE OF VACANCY PERIODONTICS

The Department of Oral Medicine, University of British Columbia, will have an opening at the rank of Assistant Professor on July 1, 1977. Salary is \$24,000–\$27,000, depending on background and experience.

Qualifications should include graduate certificate training in periodontics. Candidates must be eligible for specialty certification by the College of Dental Surgeons of British Columbia and either the American Board of Periodontology or the National Dental Examining Board of Canada.

Please submit enquiries, with curriculum vitae, to:

Dr. John D. Spouge
Department of Oral Medicine
Faculty of Dentistry
University of British Columbia
2075 Wesbrook Place
Vancouver, British Columbia
Canada V6T 1W5

ADVERTISERS' INDEX

Block Drug Co. of Canada	13
The L. D. Caulk Co. of Canada	17, 18
Colgate Palmolive Ltd.	9
Denco	15
Dentsply International	IBC, 2, 25
Charles E. Frosst	5
Lawson McKay Tours Ltd.	34
C. V. Mosby	IFC
Procter and Gamble	1
Professional Pharmaceutical	34
Warner Lambert Canada Ltd.	OBC
Weil Dental	35
S. S. White	7

Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.

THE UNIVERSITY OF BRITISH COLUMBIA FACULTY OF DENTISTRY

NOTICE OF VACANCY PAEDODONTICS

Applications are invited for a full-time position in the Department of Restorative Dentistry, University of British Columbia, Vancouver, Canada, to assist in the teaching of Paedodontics. Candidates should have completed an accredited postgraduate training programme in Paedodontics and be registrable as a dentist in the Province of British Columbia.

Duties include present participation in the undergraduate teaching of paedodontics and potential involvement in a future postgraduate certification programme which the Department plans to offer. Salary and rank negotiable according to qualification and experience. One full day per week of extramural private practice permitted.

Applications should be sent to:

Dr. T. J. Harrop
Head, Department of Restorative Dentistry
Faculty of Dentistry
University of British Columbia
2075 Wesbrook Place
Vancouver, B.C., Canada V6T 1W5

**Right here
is where
every new
denture should
prove itself.
Look for the Crescent.**

Ask your Assistant to check the linguals of the anteriors. If they're TRUBYTE® Teeth, she'll see a tiny Crescent trademark.

If she doesn't see a Crescent, the denture wasn't made with Trubyte Teeth.

When you're paying for the best, make sure you get the best.

TRUBYTE®

*Creator of fine products
for dentistry.*

D™ Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1976 Dentsply International, Inc.
All rights reserved.

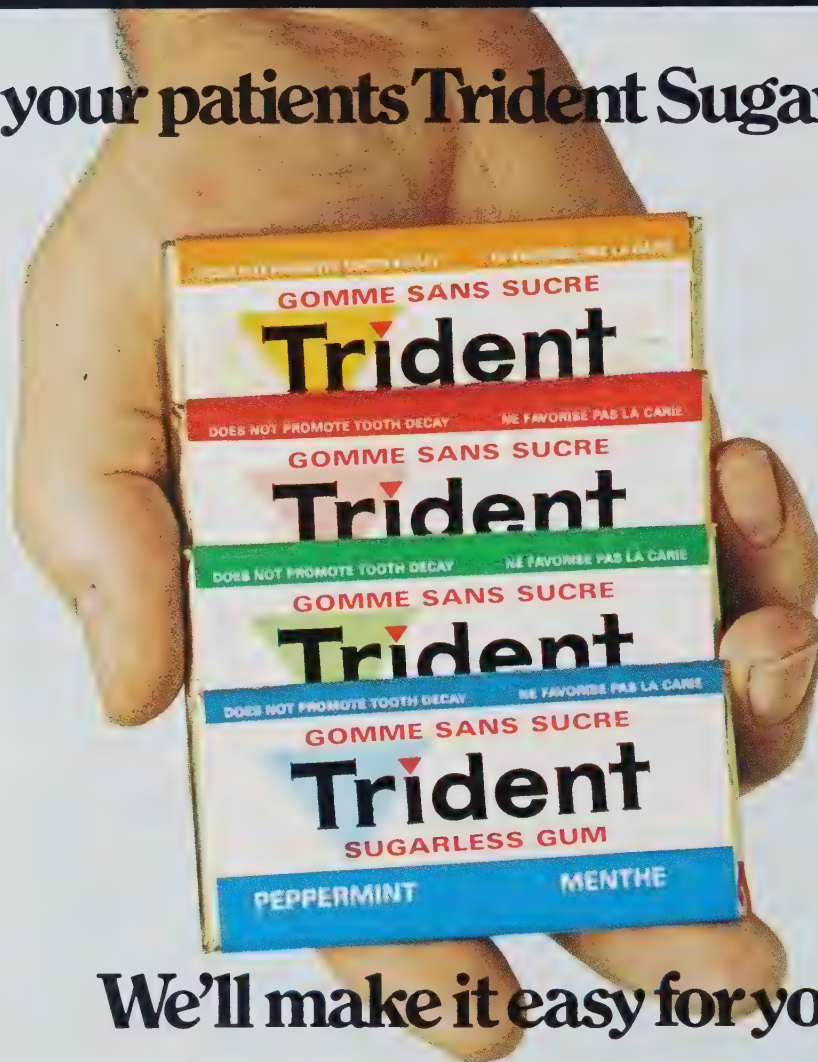
The Crescent is a registered trademark of Dentsply International Inc., York, PA.

Look for the Crescent (☾) on these popular Trubyte Brands

ANTERIORS ▶	Bioblend®	Bioform®	Biotone®	New Hue® V.F.	New Hue®
-------------	-----------	----------	----------	---------------	----------

Set a good example.

Give your patients Trident Sugarless Gum.



We'll make it easy for you.

Many dentists tell us that they're handing out Trident Sugarless Gum to their patients who chew gum. Trident is sugarless, so there's no risk of sugar damage to teeth.

Dentists recommend

Please send me the standard dentist's sample order, consisting of: 2 boxes of Spearmint, 2 boxes of Peppermint, 2 boxes of Fruit, and 2 boxes of Cinnamon—a total of 8 boxes (144 packages) for \$10.00. (Ontario dentists include 70¢ Provincial Sales Tax).

Enclosed please find my cheque ☐ money order ☐ in the amount of \$_____.

Name _____

Address _____

City _____ Zone _____ Prov. _____

Send to:
Trident, Box 2147, Toronto, Ontario M5W 1G8

that patients use fluoride toothpastes, brush properly and have regular dental check-ups. Now you can set a good example for your patients who chew gum. Give them Trident Sugarless Gum.

DENTAL JOURNAL DENTAIRE

Si non livrable
au destinataire
**RETOURNER A
L'EXPEDITEUR**
Port payé

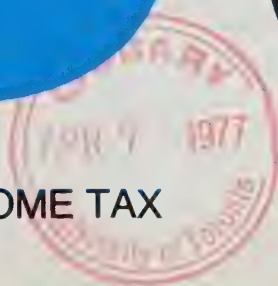
If Undeliverable
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed.

Feb/Fév 1977/Volume 43/No 2

Canadian Dental Association/Association Dentaire Canadienne



FEATURE: FEDERAL INCOME TAX



Rapid Relief for discomfort of post extraction,
scaling and gingivitis.

Chloraseptic®

Anaesthetic, antiseptic spray mouthwash and lozenge
Prompt relief of throat, mouth and gum soreness



In a study of 90 patients with oral pain due to pericoronitis, peridontitis, accidental or iatrogenic injury and aphthous ulcer, Novak concluded, "in both immediate and retrospective evaluations, 93% of the patients reported satisfactory relief of pain with Chloraseptic."¹

1. Novak, A.J.: *Oral Surg.* 34:34, July, 1972.



® EATON LABORATORIES
P.O. Box 2002
Paris, Ontario N3L 3G6

Gentlemen,
Please send me a professional sample
of Chloraseptic.

Name _____

Address _____

City _____ Prov. _____

Signature _____



® EATON LABORATORIES
Division of Norwich Pharmacal Company Ltd.
Paris, Ontario

Prevention between visits



Brushing and flossing. Good diet. And CREST.

The at-home contribution to preventive dentistry between professional visits.

CREST has the actual research and recognition of effectiveness.

In fact, CREST has more extensive research than any other fluoride dentifrice, and the only clinical research to prove *added* anticaries protection... over and above the protection provided by office-applied fluorides. Give your patients MORE protection... recommend clinically proven, clinically tested CREST.



"Crest has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care!"— Canadian Dental Association.



Leadership in research=Confidence in Crest

©1976 PROCTER & GAMBLE TORONTO CAS-381



The CLASSICTM Chair can make your patient feel better about dentistry.

When a patient enters your operatory and sees the CLASSIC for the first time, she may well get the idea that somehow this appointment is going to be different from all the others.

Because the CLASSIC, among many other things, is an elegant piece of furniture.

Then she is seated. Normally, naturally, as in a favorite chair at home. The CLASSIC Chair's unique swivel seat and back eliminate the awkward leg straddle of other contour chairs.

And right away you have established a rapport that is most helpful in dental treatment. Apprehension tends to disappear. Calm and confidence prevail. You

and your patient can discuss the oral health program with a deeper sense of mutual understanding and cooperation.

All this of course is prelude to the treatment itself. And as treatment begins the CLASSIC proves itself a great *operating* chair. You can precisely position the patient for every procedure of two-handed and four-handed dentistry. The articulating headrest gives you optimum visual and manual access to all quadrants of the oral cavity.

What's it worth to have a more responsive, more receptive patient? Isn't *patient tension* one of the most difficult and most tiring aspects of the profession?

Well, the CLASSIC won't exactly make dentistry entertainment. But it does help to make things easier for your patient and this makes every appointment a little easier on you.

Is there a better reason to tell your dealer you want to see the CLASSIC?

The CLASSICTM
by Dentsply.[®]



**DENTSPLY
Equipment**

D Dentsply International, York, PA

© 1976 Dentsply International Inc.
All rights reserved.

JOURNAL

of the Canadian Dental Association
de l'Association Dentaire Canadienne
Feb/Fév 1977/Volume 43/No 2

PUBLISHER/Canadian Dental Association
SCIENTIFIC EDITOR/R. S. Turnbull, DDS
EDITOR/Diane Charter
FRENCH SCIENTIFIC EDITOR/Robert Lambert, DDS

ADVERTISING/PRODUCTION MANAGER/Anna Spencer
EDITORIAL SECRETARY/Mary Maxwell
CLASSIFIED ADVERTISING/Marie Cosgrave
CIRCULATION/Cathy Cronin

ISSN 0382-8514

Editorial

Pour la nouvelle année: un message du président	50
---	----

Special Features

Responsibility the key word in coping with society's new challenges — McIntosh	65
Federal income tax returns by dentists	68

Regular Features

Announcements	42
Letters to the editor	46
Dentistry in the news	54
Deaths	57
In memoriam	57
Les actualités dentaires	60

Articles

The estimation of age of skeletal remains from colour of roots of teeth — Ten Cate, et al	83
--	----

Classified advertising	88
------------------------	----

Advertisers' index	92
--------------------	----

Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1976 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454.

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association.

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1976 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22).

Veuillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences. Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise.

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Canadian Dental Association,
1977, Toronto, Oct. 22-28.

Fédération Dentaire Internationale,
1977, Toronto, Oct. 22-28

Canadian Meetings

Precision Attachments in Prosthodontics, Special Presentation at University of British Columbia, March 5, 1977. Clinician: Dr. H. Preiskel. Course is designed to aid the dentist in planning the restoration of the partially dentate mouth. The applications of precision and alternative retainers will be considered together with clinical and maintenance techniques. Presentation jointly sponsored by the University of British Columbia and the Academy of General Dentistry of British Columbia. Contact: Dr. Malcolm F. Williamson, Director of Continuing Dental Education, Room 111, Instructional Resources Centre, University of British Columbia, Vancouver V6T 1W5.

Workshop in Clinical Hypnosis, St Paul's Hospital Auditorium, Saskatoon, March 26-27, 1977. Sponsored by the Saskatchewan Society of Clinical Hypnosis. Contact: Dr. Max Brook, 507 Canada Building, Saskatoon.

College of Dental Surgeons of British Columbia, Annual Convention, Empress Hotel, Victoria, April 20-23, 1977. Contact: Kenneth L. Croft, Managing Director, 1125 West 8th Avenue, Vancouver, B.C. V6H 3N4.

Ontario Society of Periodontists and Canadian Academy of Periodontology, combined seminar, Chelsea Inn, Toronto, May 6, 1977. Clinicians: Drs. Tony Melcher, Richard Ellen and Robert Schallhorn. Topics to include oral biologic and clinical experimental research as it relates to clinical periodontology. Contact: Dr. Steven Richmond, (416) 491-6211 or Dr. Frank Compton, (416) 922-4223.

Ontario Dental Association, at Sheraton Centre (formerly Four Seasons Sheraton), Toronto, May 8-11, 1977. Mrs. W.C. Durham, 234 St. George St., Toronto, Ont. M5R 2P2.

Les Journées Dentaires du Québec, at Queen Elizabeth Hotel, Montreal, May 16-20, 1977. Dr. R.M. Lang, 5171 Decarie Blvd., Montreal, Que. H3W 3C2.

Congress on Cleft Palate and Related Craniofacial Anomalies, at Royal York Hotel, Toronto, June 5-10, 1977. Congress Secretariat, 191 College St., Toronto, Ont. M5T 1P7.

Western Canada Dental Society, at Banff Springs Hotel, Banff, Alberta. July 3-6, 1977. Dr. D. Pedlar, Publicity Chairman, Western Canada Dental Society, 1711 - 4th St. S.W., Ste. 303, Calgary, Alta. T2S 1V8.

Canadian Society of Oral Surgeons, Annual Convention, Hyatt Regency Hotel, Toronto, October 28-31, 1977. Contact: Dr. W. Prusin, Convention Chairman, 919 Ellesmere Rd., Scarborough, Ont. M1P 2W7.

Pacific Dental Federation Convention, July 23-26, 1978, Vancouver. Contact: Dr. Ken Neuman, President, Pacific Dental Federation, 1125 West 8th Avenue, Vancouver, V6H 3N4.

International Meetings

University of Southern California School of Dentistry, International Colloquium on "Dental Porcelain — the State of the Art, 1977", Feb. 24-26, 1977. Contact: USC School of Dentistry, Department of Continuing Education, 925 W. 34th Street, Los Angeles, California 90007.

Second Canadian Congress of Dentistry for Children

Dates: May 20-22, 1977 (Friday, Saturday, Sunday)

Place: Queen Elizabeth Hotel, Montreal

Registration: \$100.00

Information: Dr. David Kozloff

3333 Queen Mary Rd. #490

Montreal, Que. H3V 1A2

All dentists will be receiving a program pamphlet with complete information.

Deuxieme Congrès Canadien de Dentisterie Pédiatrique

Date: le 20-22 mai, 1977 (vendredi, samedi, dimanche)

Endroit: Hôtel Reine Elizabeth, Montréal

Inscription: \$100.00

Renseignements: Dr. David Kozloff

333 Ch. de la Reine Marie #490

Montréal, Que. H3V 1A2

Tous les dentistes recevront bientôt un programme contenant tous les renseignements.

Bristle up your patient's plaque attack

introducing **Py-co-pay[®]** **Softex 4[®]**

When a 4-row brush is
preferred for plaque control,
commend the only 4-row
that can make these claims.

Over 3,200 bristles in
Softex 4 work to ensure extra
cleaning power, especially in the
plaque-prone sulcular region

0.07" diameter nylon
bristles offer safer, more
penetrating cleansing of
supragingival and subgingival
plaque from sulci, occlusal
bits, fissures and
interproximal surfaces

Double-rounded,
end-polished bristle tips
help protect tissues from
possible abrasion

- **compact brush head**
slimmer and more manoeuvrable
— makes it easier to clean
hard-to-reach areas of the
teeth and gingival sulci
- **smooth, rounded head
contours** not sharp or
angular — helps diminish the
danger of trauma to sensitive
tissues, especially those
opposite the buccal of the molars
- **tapered head design**
less plastic bulk — provides
immediate contact of the bristles
with teeth and gingivae

Choose the Softex that fits your patient's needs

SOFTEX JUNIOR	SOFTEX 3	SOFTEX 4
3 staggered rows 1200 bristles	3 staggered rows 2400 bristles	4 rows 3200 bristles



Professional Relations Division
Block Drug Company (Canada) Ltd.
36 Northline Rd., Toronto, Ontario M4B 3E3
"Quality Products for Dental Health"

24th Annual Oral Pathology Course, Armed Forces Institute of Pathology, Washington, D.C., Feb. 28 to March 4, 1977. Course director: Colonel Southern P. Hooker, chairman of the Department of Oral Pathology. Curriculum designed for oral pathologists, general pathologists, oral surgeons, oral diagnosticians, periodontists and clinicians involved in the practice of oral medicine and for residents in these specialty groups. Fee is \$125.00 for civilian registrants. Contact: The Director, Armed Forces Institute of Pathology, Attn: AFIP-EDE, Washington, D.C. 20306.

American Dental Hygienists' Association, at Boston, March 30-April 3, 1977. Mr. John Venator, 211 East Chicago Ave., Chicago, Illinois.

World Congress of Oral Implantology, at Cairo, Egypt, April 6-8, 1977. Alice Turner, International College of Oral Implantologists, Suite 7000, The Chrysler Building, 405 Lexington Ave., New York, 10017.

NDEB announces 1977 examination dates

The National Dental Examining Board of Canada has announced the following 1977 examination dates:

1. Written examination May 24, 25 and 26, 1977 at selected Universities in Canada and U.S.A.
2. Preclinical examination May 30, 31 and June 1 at The University of Western Ontario in London.
3. Clinical examination June 2 to June 10 at The University of Western Ontario, London.
4. Preclinical examination August 15, 16 and 17 at McGill University in Montreal.
5. Clinical examination August 18 to August 26 at McGill University in Montreal.
6. Written examination October 24, 25, 26, 1977 at selected Universities in Canada and U.S.A.

The examinations in August at McGill University are conditional upon a sufficient number of applicants.

American Association of Endodontists, at Houston, April 13-17, 1977. Mrs. Eleanor L. Baker, P.O. Box 11728, Atlanta, Georgia 30305.

California Dental Association, World of Dentistry, annual scientific meeting, Anaheim, California, April 15-18, 1977. Contact: California Dental Association, P.O. Box 91258, Los Angeles, Calif. 90009.

American Academy of Oral Medicine, at Toronto, May, 1977. Mrs. Joyce Guithues, 829 Hanamore Crescent, St. Louis, 63122.

American Academy of Orthodontics for the General Practitioner, Inc., at Delavan, Wisconsin, May 23-26, 1977. Mrs. M. L. Watson, 3953 North 76th St., Milwaukee, 53222.

American Academy of Pedodontics, at Bal Harbour, Florida, May 29-June 1, 1977. Merle C. Hunter, 211 East Chicago Ave., Suite 1235, Chicago, Illinois 60611.

Pain Control in Dentistry, World Congress, Mauritius Island, June 7-9, 1977. Contact: Dr. Paul Virapin, Executive Secretary, 15, avenue de Maurin, 34000, Montpellier, France.

American Dental Association, 28th Annual Management Conference, at ADA Headquarters, Chicago, June 13-15, 1977. American Dental Association, 211 East Chicago Ave., Chicago, Ill., 60611, USA.

Third International Odontological Congress of the Brazilian Dental Association and First National and International Congress of the Odontological Services of the Armed Forces, Federal University of Rio de Janeiro, Brazil, July 15-21, 1977. Contact: Associacao Brasileira de Odontologia, Avenida 13 de Maio, 13-10 andar, conjuntos 1001/2-5/116, Rio de Janeiro, R.J., Brazil.

International Association of Oral Myology, Fifth Annual Convention, Lodge of the Four Seasons, Lake

Ozark, Missouri, June 18-21, 1977. Contact: Dr. John Howland, 457 Coventry Green, Suite 120, Crystal Lake, Illinois 60014.

American Dental Society of Europe, Island of Rhodes, June 27-July 1, 1977. Dr. James Molony, Secretary, 110 Harley St., London, W.I., England.

Swedish Dental Hygienists' Association, Sixth International Symposium on Dental Hygiene, at Stockholm, Sweden, June 30-July 2, 1977. Symposium theme: plaque control. Working language: English. Eve Runsten, Secretary General, Sixth International Symposium on Dental Hygiene, c/o RESO Congress Service, S-105 24 Stockholm.

International Epidemiological Association, Eighth International Scientific Meeting, at Las Croabas, Puerto Rico, Sept. 18-23, 1977. Dr. Carlo Luis Gonzalez, Program Secretary, Universidad de Los Andes, Facultad de Medicina, Centro de Estudios de Post-Grado, Merida, Venezuela.

Dental Association of South Africa, Fifth International Scientific Congress, Stellenbosch, Republic of South Africa, Sept. 26-30, 1977. Contact: Dr. L. S. Maresky, Congress Secretary, P.O. Box 96, 7503 Parowvallei, C.P., South Africa.

Australian Dental Association, Jubilee Congress, Melbourne, Feb. 12-16, 1978. Contact: W. Don Hefron, Federal President, Australian Dental Association, 116 Pacific Highway, North Sydney, N.S.W.

Circulo Odontologico Del Sur (Southern Argentina Dental Society), Second International Congress and Third Socio-Economic Congress, Bahia Blanca, Argentina, May 25-28, 1978. International lecturers will deal with all clinical specialties. Contact: Dr. R. L. Ellis, Associate Professor, Department of Community Dentistry, University of Toronto, Faculty of Dentistry, 124 Edward St., Toronto.



“...but
if you feel
any pain,
take one or two
N 222 * tablets.”

Not every patient needs an analgesic after dental care — but some do, even though you have done everything possible to avoid any patient discomfort.

When a patient is in pain, or when there is a possibility that pain will occur later, suggest N 222 * tablets.

222 * is a reliable analgesic — you and your patient can depend on it.

INDICATIONS: For relief of mild to moderate pain, fever and inflammation as in influenza, common cold, low back and neck pain, headache, trauma, following dental and surgical procedures.

DOSAGE: Adults — 1 or 2 tablets one to three times daily; Children's dosage, when recommended by a physician: 10 to 14 years, one tablet, one to three times daily; 5 to 10 years, one-half tablet, one to three times daily.

CONTRAINDICATIONS: Gastrointestinal ulceration and sensitivity to any of the components.

WARNINGS: Salicylates increase the effects of anticoagulants. Caution is necessary when salicylates and anticoagulants are prescribed concurrently. Also, salicylates may depress the concentration of prothrombin in the plasma. Large doses of salicylates may affect insulin requirements of diabetics. Salicylates may potentiate sulfonylurea hypoglycemic agents. Analgesic abuse (excessive and prolonged therapy) has been associated with nephropathy. TO AVOID

ACCIDENTAL POISONING ACETYSALICYLIC ACID PREPARATIONS MUST BE KEPT WELL OUT OF REACH OF CHILDREN.

PRECAUTIONS: Give with caution to patients with asthma, other allergic conditions, bleeding tendencies, or hypoprotrombinemia. Salicylates can produce changes in thyroid function tests.

Observe care in use of codeine, although tolerance and addiction are rare. Give codeine with caution to patients with severe respiratory depression. Its depressant effect may be enhanced by concurrent administration of sedatives and tranquilizers.

ADVERSE REACTIONS: Acetylsalicylic acid: *Gastrointestinal:* dyspepsia, heartburn, nausea, vomiting, diarrhea, gastrointestinal ulceration and bleeding. *Ear reactions:* tinnitus, hearing loss. *Hematologic:* anemia, leukopenia, thrombocytopenia, purpura. *Dermatologic and Hypersensitivity:* urticaria, angioedema, pruritus, various skin eruptions, asthma and anaphylaxis. *Miscellaneous:* mental confusion, drowsiness, sweating and thirst.

Codeine: Average or large doses may cause various gastrointestinal symptoms such as nausea, vomiting and constipation.

Caffeine: May cause nausea, nervousness, insomnia, headache, vomiting, palpitation, vertigo, muscle tremor, sensory disturbances, excessive diuresis in sensitive patients. Large doses may cause gastric ulceration.

FULL INFORMATION AVAILABLE ON REQUEST

HOW SUPPLIED

N 222* Tablets — White, scored, engraved 222 on one side. Each tablet contains: acetylsalicylic acid 375 mg, caffeine citrate 30 mg, codeine phosphate 8 mg. Available in tubes of 12; bottles of 40 and 100; also bottles of 60 with safety cap.

*Trademark



(MC-390a)

Frosst

FOUNDED IN CANADA IN 1899
CHARLES E. FROSST & CO
KIRKLAND (MONTREAL) CANADA

Post-graduate training and graduate education in dentistry

I read with great interest the article "Post-Graduate Training and Graduate Education in Dentistry" by Dr. A. H. Melcher which was published in the December, 1976, issue of the Journal. As is usual, Dr. Melcher's article was well written and thought-provoking.

I should like to state that I am in agreement with most of what Dr. Melcher has said, but, like Dr. Jordan's excellent critique, do not agree with the limiting of selection of heads of clinical departments to the "clinically academic". Indeed, were I to select one group over the other (which I would prefer not to) I would lean more strongly toward the clinical consultant as being someone who would gain the respect of his clinical staff and the practising dentists within the area of the university from whom he must draw his part-time teachers and yet have the necessary appreciation and interest in basic and clinical research upon which teaching in his department must be founded.

I should like to congratulate Dr. Melcher on this excellent article and the CDA for publishing it.

*A. Ruprecht,
Associate Professor and A/Head,
Department of Diagnosis
and Oral Radiology,
University of Saskatchewan*

May I be permitted to comment on some aspects of Dr. A. H. Melcher's recent paper on Postgraduate Training and Graduate Education in Dentistry (JCDA, Vol. 42, Page 591, December, 1976) and, following his admirable lead and to avoid misunderstandings, start by defining a profession according

to the Oxford English Dictionary (O.E.D.) as "a vocation in which a professed knowledge of some department of learning or science is used in the practice of an art founded upon it". This definition is applicable to dentistry itself, of course, and also to the dental specialties. Its central concept provides the basis for distinguishing between the learned professions and trades, many of which call for skilled handicraft but none of which require knowledge of a department of learning or science nor are they arts founded on such a base.

Deriving from this definition of dentistry, it is clear that to become a dentist it is necessary to receive an education (O.E.D. systematic schooling, instruction and training) in the departments of learning and science upon which dentistry is founded and a training (O.E.D. systematic instruction and exercise) in the art of dentistry.

To become a dental specialist, I would submit, an analogous education and training are also required at an appropriately advanced and specialized level. However the novel suggestion in Dr. Melcher's paper which is explicit in the title and argued subsequently at some length, is that to become a specialist only training is required, education beyond the D.D.S. level being only needed for those who intend to become clinical teachers or dental scientists. This explicit denial of any necessity for further education for trainee specialists carries the implicit denial of the existence of a department of advanced learning or science upon which the specialties are based, and hence has the topsy-turvy effect of reducing the specialties to the vocational level of the skilled trades.

It would seem safe to assume that this was not the intent of the paper. Nonetheless the use of the word train-

ing for that experience needed to become a dental specialist contrasted to the word education for that required for dental teachers and research workers is in my view both misleading and pejorative. From the basic premise of the definition of a professional man, whether specialist or general practitioner, and from the practicalities of specialist dental education, I would suggest that advanced education in the scientific base of the requisite area of knowledge is as necessary for the specialist as for the teacher or researcher, and in addition both specialist and teacher require advanced training in the art of their particular field of clinical competence. Like Dr. Sperber in his comments on the paper, I think the proposal to reduce the educational component of specialist training is misguided and if adopted, would inevitably lead to a lowering of standards of professional ability of dental specialists.

It is true as Dr. Melcher points out that in this regard there are recurrent difficulties arising from university courses, particularly those given by basic scientists, that contain considerable amounts of material that is redundant or irrelevant to the trainee specialist. The individual universities can do a good deal to control this and it does seem a less serious problem than its converse, inadequate coverage of the scientific base of a clinical discipline. Accreditation surveys of specialty training programmes also can and do help to correct both these types of deficiency and others, but in my opinion the solution to the problems of training standards lies some way in the future when the profession and the universities in Canada come to accept a national examining body as the only final arbiter. Considerable progress has

already been achieved by the Royal College of Dentists of Canada in this direction but it is still some way from occupying the decisive and accepted position in dentistry that the Royal College of Physicians and Surgeons has in medicine. When attainment of the Fellowship of the Royal College of Dentists of Canada becomes the standard means of achieving specialist registration, across the country, as is the analogous situation in medicine now, then the universities will be in a much better position to arrange and conduct education in the dental specialties. Freed of the responsibility of continually monitoring the competence and progress of the trainees, as this will be done by the College, they should be able to develop broader programmes with more elective components and more options open for the individual student to select according to his interests.

It is a comment on the present situation that the Royal College of Dentists of Canada is not mentioned in Dr. Melcher's paper.

A final minor comment is on the assumption in the paper that completion of a Ph.D. is a necessary prerequisite for a dentist to engage successfully in research. This is the sort of assumption that those of us in universities all too easily make but I seriously question its validity. It is true that in physics, chemistry and other purely scientific disciplines, virtually all research is done by Ph.D.'s but in these subjects the degree is really analogous to the D.D.S. in dentistry or the M.D. in medicine. Thinking back to my time in the National Institute of Health in Washington, D.C., the largest and I think unarguably the most successful health sciences research facility in existence, the great majority of the dentists and physicians working there did not have a Ph.D. and still produced much worthwhile and some excellent research. Of course, there will always be some dentists whether pursuing specialist training or not, who will be more interested in research than their colleagues. Some of these will want to take a Ph.D. (I did myself for that matter) and should be given every

encouragement and assistance to do so, but the idea that only this group can be expected to do research should, I suggest, be quietly forgotten.

Dr. Melcher's paper, in essence, is the rationale for a proposal that separate training programmes should be established for groups that he defines as dental specialists, clinical academics, clinical consultants and dental scien-

tists. The proposal seems to me to be divisive and potentially damaging to the profession, and unsound on educational grounds.

*J. H. P. Main,
Professor of Oral Pathology,
Faculty of Dentistry,
University of Toronto*

Letters continue on next page

Statistiques vitales

Un sondage effectué récemment auprès des dentistes a révélé que 34 % des dentistes s'approvisionnent actuellement chez des compagnies qui font leurs expéditions par la poste . . . et la principale raison de ce phénomène, ce sont les prix de rabais. Est-ce là une révélation stupéfiante?

Pas vraiment. Des statistiques comme celles-ci, publiées à la suite d'un sondage, on peut les comparer à un maillot de bain de femme . . . ce qu'il révèle est peut-être très intéressant, mais c'est ce qu'il cache qui compte vraiment! D'autres chiffres moins spectaculaires, mais contenus dans le même rapport, disaient tout autre chose. Près d'un tiers des dentistes qui s'approvisionnent par la poste se plaignent de la "lenteur des livraisons" et du fait qu'il y a "trop de commandes en attente". Parmi les autres plaintes, citons notamment celles-ci: marchandises endommagées en cours de transport; substitution non autorisée d'une marque à une autre, et difficulté à retourner les marchandises . . . de même que la politique des maisons de vente au rabais, basée sur le principe "pas de crédit"; enfin, en général, un manque de renseignements sur les produits.

Ces dentistes ne lisaient peut-être pas toutes ces clauses imprimées en petits caractères!

Tout bien considéré, Docteur, les économies réalisables en s'approvisionnant par la poste sont-elles réelles . . . ou illusoires?

• C'est là point d'importance vitale.



DENCO

Toothkeeper evaluation?

Dr. D. J. Bachinsky, a member of the Board of Directors of the American Society for Preventive Dentistry, wrote a letter in the December, 1976, issue of the CDA Journal appealing for ideas to help in the substitution of more nutritious foods for sugar-containing ones in

school vending machines. While I support enthusiastically his and the ASPD efforts and wish them well, I am concerned about his advocacy of the Toothkeeper Program as one means to achieve this.

Toothkeeper is a school preventive program using seemingly well-

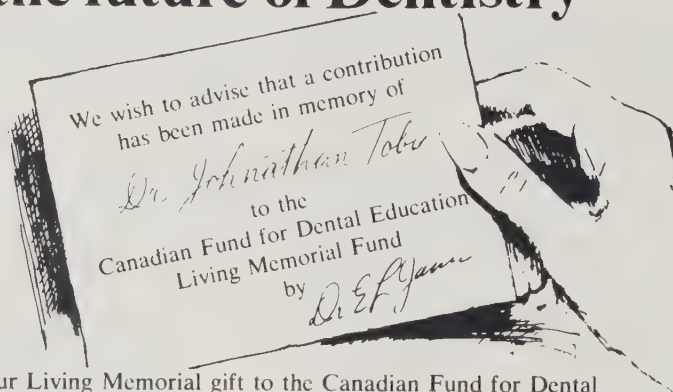
prepared education materials and the class teacher, after instruction, as the primary teacher of dental knowledge and skills. Initially this commercial program's effectiveness was not properly tested using accepted controlled study methods. However, in the 1975 Spring issue of the Journal of Public Health Dentistry, three controlled evaluative reports by different respected dental researchers in three varying geographic locations in the USA were published. The consensus was that Toothkeeper is not effective in improving oral hygiene or gingival status compared to control group experience. It not only is ineffective, but also is relatively expensive to purchase.

Perhaps since these 1975 publications, the necessary modifications and subsequent evaluations of Toothkeeper, including its effect on dietary habits, have been made but not yet published. Until then, it would be unwise to recommend this program be extended to Canadian schools.

I am trying to obtain the description I heard recently of a successful school cafeteria dietary change method in the USA and will send this directly to Dr. Bachinsky.

*D. W. Lewis,
Faculty of Dentistry,
University of Toronto*

With a CFDE Living Memorial you honour the memory of a friend colleague, or loved one...and serve the future of Dentistry



Your Living Memorial gift to the Canadian Fund for Dental Education becomes a lasting tribute to the memory of a friend, colleague or loved one. And you contribute to the future of Dentistry by supporting CFDE's efforts in behalf of dental education and dental care.

The family of the person you honour promptly receives a memorial card in your name. The name of the person you honour is permanently inscribed in the beautiful Book of Remembrance on display at CFDE headquarters.

Send your Living Memorial contribution to:
Canadian Fund for Dental Education
Suite 205, 44 Eglinton Avenue West
Toronto, Ontario M4R 1A1

Specify the name of the person you wish to honour, the name and address to which the acknowledgement should be sent, and your name.



CANADIAN FUND FOR DENTAL EDUCATION

Your avenue for giving, to enhance the performance
and prestige of Dentistry.

President of Great Lakes Society of Orthodontists

Dr. Morris M. Stoner of Indianapolis was elected president of the Great Lakes Society of Orthodontists during the Society's recent annual session at Lake Buena Vista, Florida.

Other officers elected at the meeting include: Dr. Walter C. Buchsieb of Dayton, president-elect; Dr. Donald G. Woodside of Toronto, vice-president; and Dr. Eugene L. Dellinger of Fort Wayne, Indiana, secretary treasurer.

Drs. Stoner, Woodside and Dellinger will also serve as delegates to the American Association of Orthodontists.



A MARI USQUE AD MARE: FROM SEA TO SEA



Wherever you practice there is a Nobilium laboratory nearby . . . ready to process your partials with the "aristocrat of chromium alloys" . . . partials that satisfy every patient desire for dependable fit, functional service, oral comfort and lifelike aesthetics. Here is the list of skilled laboratories from British Columbia to Nova Scotia equipped with the latest Nobilium equipment and materials and dedicated to serve your every requirement. Entrust your prescriptions to them with confidence.

ONTARIO — TORONTO

Duracast Dental Laboratories
8 Taber Road, Rexdale

Hirsh Dental Laboratories Limited
495 Adelaide Street West

Modent Dental Laboratory
881 Eglinton Avenue West

Pearce Dental Lab
250 Lawrence Avenue West

**The Posen & Furie
Dental Laboratories Limited**
1366 Bathurst Street

Walter Wood Dental Laboratories
527A Bloor Street West

ONTARIO — HAMILTON

**Allen & Rollaston
Dental Laboratory**
Medical Art Bldg., Hamilton 20

ONTARIO — ST. CATHARINES

J. W. Birnie Dental Lab.
206 King Street

ONTARIO — CAMBRIDGE

Achmann Dental Lab.
87 Grand Ave. South

ONTARIO — ORILLIA

Orillia Dental Laboratory
225 West Street North

ONTARIO — OSHAWA

Multi-County Dental Laboratories
172 King Street East

BRITISH COLUMBIA — VANCOUVER

**Northwest Dental Laboratories
Limited**
1070 Homer Street

Tec-Kraft Dental Labs
1620 West 5th St.

BRITISH COLUMBIA — VICTORIA

Turner Dental Laboratory
1207 Douglas Avenue, Suite 521

NOVA SCOTIA — AMHERST

**Walter Horton
Dental Laboratories Limited**
31 La Planche Street

ALBERTA — CALGARY

Pro-Dent Lab. Ltd.
6707 Elbow Drive S.W.

Frame Master Lab.
339 - 6th Avenue S.W.

ALBERTA — EDMONTON

Northwest Dental Laboratory
10540 - 115th Street

Universal Dental Laboratories Ltd.
10066 Jasper Avenue

MANITOBA — WINNIPEG

**Associated Crown & Bridge
Laboratory, Limited**
201 - 407 Graham Ave.

Manitoba Dental Labs.
333 Kennedy St.

QUEBEC — FABREVILLE

Oraliun Enrg.
720 Rue Gilles

QUEBEC — MONTREAL

Dentarium Laboratories
6997 Victoria Avenue

Nobident Dental Laboratory
3726 Jean-Talon West

Roger Sauve Dental Laboratory
5545 Beaubien Est

QUEBEC — QUEBEC CITY

G. Garneau Dentel Lab.
386 Dorchester, Sud.

EDITORIAL

Pour la nouvelle année: un message du président

Nous voici au début de l'année 1977 et je saisis l'occasion pour vous entretenir de certaines questions auxquelles doit faire face notre association.

Ce n'est pas le nouveau qui manque, cette nouvelle année, à l'ADC: nouveau siège social à Ottawa; nouveau directeur exécutif — M. Lloyd Stevenson; nouveau président, depuis la mi-septembre. Nous devons régler certains problèmes et l'un d'eux est la législation anti-coalition, modifiée le 1er juillet 1976, qui couvre toutes les industries des services, y compris ceux qui sont offerts par la profession dentaire.

En tête des choses importantes dont s'occupe l'ADC se place le congrès 1977 de la Fédération dentaire internationale, prévu pour le mois d'octobre à Toronto. Ce sera la première fois que cet événement international aura lieu au Canada. Le comité du congrès, sous la présidence du Dr Murray Cornish, organise cette assemblée depuis près de deux ans déjà. Nous portons une grande reconnaissance à ce comité ainsi qu'aux centaines de bénévoles qui s'occupent des préparatifs; ils ont déjà passé un temps considérable à exécuter les diverses tâches qui leur étaient assignées et, à mesure que nous nous approchons du mois d'octobre, on peut prévoir la nécessité d'organiser d'innombrables réunions. Le congrès de l'ADC de 1977 aura lieu conjointement avec l'assemblée de la FDI.

Nous essayons de nouveau, cette année, de recruter le plus grand nombre possible d'adhérents volontaires en Ontario et au Québec. Cette tâche revient conjointement aux diverses associations professionnelles et à l'ADC. Il faut considérer trois points importants lorsque nous soulevons la question d'adhésion volontaire. Premièrement, plus nous obtenons d'adhérents en Ontario et au Québec, plus le revenu de l'association augmente. En outre, le nombre d'adhérents de ces deux pro-

vinces détermine leur représentation au sein du Bureau des gouverneurs. Enfin, il y a également un rapport entre l'adhésion volontaire et la représentation auprès du gouvernement fédéral. Nous devons faire preuve d'un puissant organisme national afin de pouvoir prouver, lorsque nous négocions avec le gouvernement au nom de la profession, que nous représentons presque 100 pour cent des dentistes canadiens. Notre profession ne peut simplement pas se permettre de se fragmenter.

Ainsi que je l'ai déjà dit, nous sommes installés au nouveau siège social à Ottawa depuis le début du mois d'août. Le déménagement a créé beaucoup de difficultés, entre autre le fait que seulement trois employés de l'ADC ont quitté Toronto pour nous suivre. Actuellement, notre personnel à Ottawa compte quinze employés. Pour ceux d'entre vous qui n'ont pas encore eu l'occasion d'admirer le nouveau siège, puis-je vous dire que vous en serez très fier. L'inauguration officielle est prévue pour le printemps de 1977. Nous sommes assez inquiets en ce qui concerne les espaces destinés à la location, mais nous sommes en train de négocier avec quelques locataires éventuels.

Nous avons l'intention d'organiser deux réunions du Bureau des gouverneurs en 1977, au lieu d'une seule, et toutes deux seront tenues à Ottawa, contrairement à ce que nous faisions par le passé quand elles avaient lieu au cours du congrès de l'ADC. Nous réalisons que deux réunions par an reviennent cher, mais nous sommes convaincus que par ce moyen, nous améliorerons la communication entre les associations membres de l'ADC, nous faciliterons les prises de décisions importantes et nous éviterons les malentendus.

Les "régimes à tiers" sont de plus en plus nombreux. J'ai été très surpris

d'apprendre récemment que pour certaines villes de l'Ontario, de 30 jusqu'à 70 pour cent des honoraires dentaires étaient réglés par des tiers. Nous devons nous familiariser avec ces programmes en ce qui concerne diverses questions comme, par exemple la transmission d'archives, les problèmes d'arbitrage etc. Nous devons connaître l'étendue de notre responsabilité lorsque nous traitons avec le gouvernement ou les compagnies d'assurance à l'égard des régimes dentaires qu'ils offrent.

La législation anti-coalition que je mentionnais plus haut constitue le problème le plus récent auquel nous devons faire face. Aux termes des modifications qui sont entrées en vigueur le 1er juillet 1976, les dentistes ne pourront légalement faire un accord ou s'organiser entre eux pour diminuer indûment la concurrence lorsqu'il s'agit de la fourniture de services dentaires et autres frais. Ainsi, un accord fait par des dentistes concurrents, en vue d'établir des tarifs uniformes et minima en paiement de services de même catégorie, de partager une entreprise ou de ne pas fournir de traitements aux patients d'une région donnée, pourrait constituer une infraction. Par exemple, si les dentistes d'une certaine région se mettaient d'accord pour adopter le barème des honoraires fixé par le "guide des honoraires" publié par l'Association, ils seraient sans doute coupables d'une infraction.

Les conseillers juridiques étudient actuellement les conséquences des modifications qui ont été portées à la "Loi relative aux enquêtes sur les coalitions" relativement au guide des honoraires et à diverses autres questions telles que les restrictions qui sont imposées dans le domaine publicitaire.

Suite à la page 60



Son traitement au fluorure est terminé. Laissez le fluorure de Colgate prendre la relève.

Le fluorure MFP* de Colgate* donne à vos clients une protection supplémentaire contre la carie, entre deux traitements.

C'est un fait. Nos tests cliniques ont prouvé que l'emploi **seul** de Colgate au fluorure MFP réduisait considérablement le taux de caries nouvelles. Dans le cadre d'un traitement local, il devrait donc entraîner une réduction encore plus notable. Colgate au MFP présente des avantages spécifiques et importants: 1. L'usage régulier de Colgate rend les dents plus **résistantes à la carie**. Nous croyons que le MFP

(monofluorophosphate de sodium) contenu dans Colgate parvient à transformer la couche d'apatite qui recouvre les dents, en fluorapatite (un fluorophosphate de calcium), grâce à la similarité de propriétés chimiques de ces deux substances.

2. Tandis que certains dentifrices ont tendance à tacher les dents, il est bon de savoir que Colgate avec MFP ne présente pas ce problème.

3. Colgate au MFP est reconnu pour la **stabilité de son fluorure**; même après trois ans, le monofluorophosphate de sodium reste présent et efficace.

Aussi, dès que vous aurez terminé leur traitement au fluorure, parlez à vos clients de cette protection supplémentaire que leur apporte le dentifrice Colgate au MFP. Donnez-leur une chance de plus de lutter contre la carie.



"Colgate avec MFP s'est révélé un dentifrice préventif contre la carie dentaire et son emploi peut avoir une valeur importante lorsqu'on l'utilise dans le cadre d'un programme d'hygiène buccale exécuté avec application et de soins dentaires professionnels réguliers."

L'Association Dentaire Canadienne.

Colgate-Palmolive Canada

*TM Req'd.

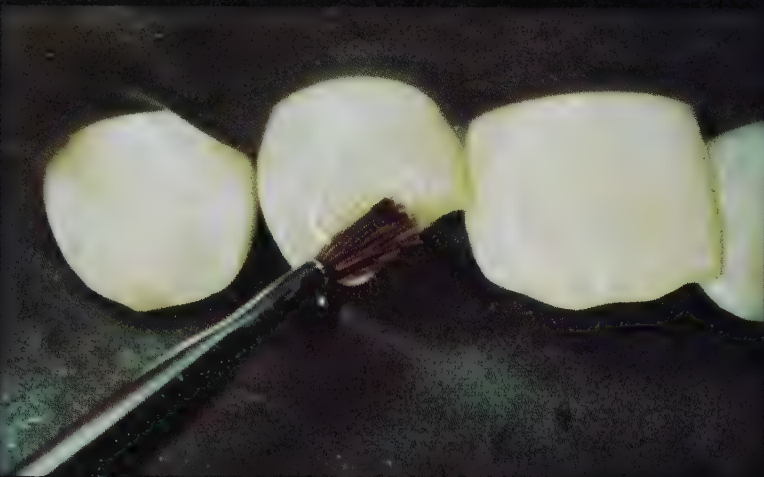
Lets you bo with one



1. Class IV fracture in upper right lateral incisor.



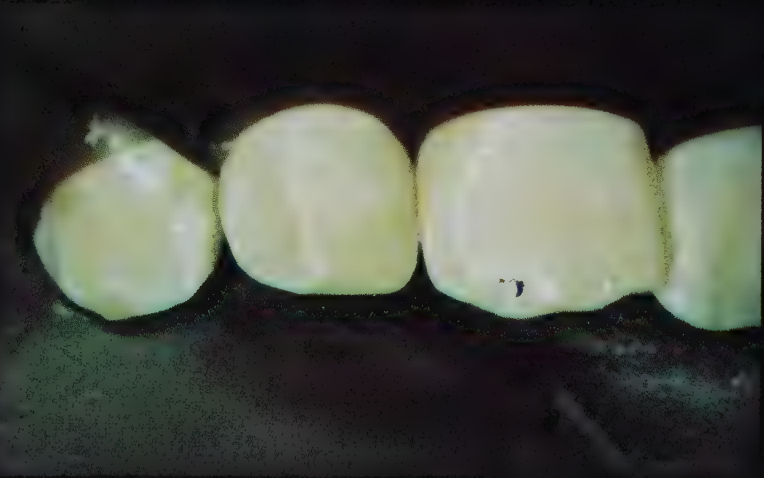
2. Adaptation of crown form.



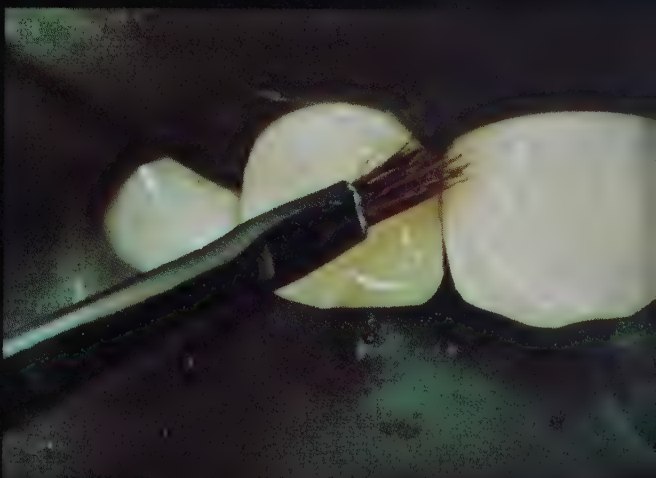
4. Application of optional bonding mix.



5. Powderlite in place with crown form removed.

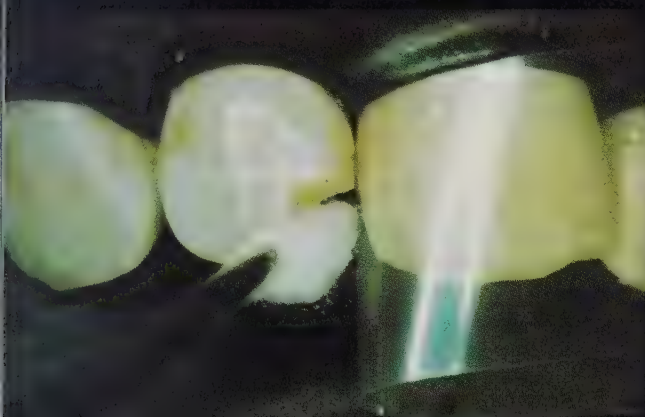


7. Finishing procedure completed.



8. Optional glazing step.

l, fill and glaze powder/liquid.



Application of acid etch.



Finishing of Powderlite.



Finished Powderlite restoration. In just minutes
a smile is made perfect again.

NEW POWDERLITE™

Now artistry and simplicity
come back to dentistry.

Some composite kits today contain many jars, boxes, tubes, and swabs that add up to something you don't want—excessive cost.

If you prefer beautiful restorations simply made instead of complexity and clutter, then new Powderlite is for you.

All you need is one liquid and one powder, mixed in different proportions, to bond, fill, and glaze. And in simple restorations where bonding and glazing are not necessary, then one mix is all you need.

As you can imagine, Powderlite's simplicity saves time.

Perhaps best of all, Powderlite is a high quality composite that holds up under the most rugged use in most classes of restorations.

Artistry, simplicity, durability. Now you can have it all in a single powder/liquid composite. Ask your full service dealer for complete information on Powderlite, the new dental restorative from S. S. White.

S. S. White Dental Products International
Philadelphia, Pennsylvania 19102



S.S. WHITE
PENNALT
HEALTH PRODUCTS
CHEMICALS ■ EQUIPMENT

1977 DENTAFACTS PROGRAM DESIGNED TO MEET INFORMATION NEEDS OF PRACTICING DENTIST

In the year just ended, the Canadian Dental Association's cassette program or continuing education, called DENTAFACTS, provided Canadian dentists with 50 lecturettes on many aspects of dental practice, along with clinical photographs, charts, tables and graphs making for easier comprehension of the spoken word.

There were talks on orthodontics, endodontics, prosthodontics and pedodontics. There were speakers on tooth fractures, bone fractures, root problems, dry sockets, tooth eruption; on tooth crowding, space maintainers, diastemata; on pain and pain control, acupuncture, hypnosis, analgesics, anaesthetics, barbiturates, headaches.

The program was heavy on bridge-work, radiology and cements. There were overviews of therapeutic drugs, amalgams, resins and tooth paste. Operative dentists got further information on curettage, gingivectomy and flaps, on broken instruments, haemorrhage, musculature, bone, sclera and the TMJ. Techniques for acid etching and restorations were covered. Nutrition was not neglected. And as an added bonus, there was a talk on the swine flu vaccination program, as a

subject of interest to dentists both professionally and personally.

All this was done in a series of 12 monthly cassettes, to which subscribing dentists listen at their leisure, and receive study credits which count towards relicensure in an increasing number of provinces.

In 1977 the DENTAFACTS program is being reoriented more towards the practical informational needs of the average practising dentist, with particular emphasis on practice management, preventive dentistry, and advances in techniques and products.

The new editor of DENTAFACTS, Dr. Paul Greenacre of Ottawa, is arranging an impressive list of contributors and topics for 1977. Some of the most respected speakers on dental subjects in the United States will be contributing to the Dentafacts tapes, as well as many Canadian speakers whose strength is based more on practical experience than on academic appointments. They talk the workaday language of the GP. They know his interests and needs, and how to help him.

For example, the DENTAFACTS program for January included a 20 minute talk by Dr. Hugh Doherty of

Jersey City, N.J., the well-known American authority on dental practice administration. His subject was, "How to select auxiliaries". Complementing this presentation was a very pertinent discussion of problems relating to optimizing your relations with your staff, and maximizing the contributions that your staff makes to your practice. The speaker was Joanne Taskett, a management consultant in New York. Dr. W. C. Deacon of Ottawa talked on simplifying the almost overwhelming volume of paper work in a busy practice. And on the scientific side, there were talks on anti-inflammatories and muscle relaxants.

Assisting Dr. Greenacre in making the cassette program even more helpful to the wet-fingered dentist is a panel of editorial consultants comprising Dr. Bernard Dolansky of Ottawa on endodontics; Drs. W. C. Deacon, Ottawa, R. J. Prevost, Montreal, and Brock Rondeau, London, on general practice; Dr. Neil Munro of Toronto on orthodontics, and Dr. Harvey Freedman of Toronto on periodontics. Dr. George S. Beagrie of Toronto, who retired as editor of the program in December after five years of successful stewardship, also is remaining as an editorial consultant, although the main direction of his extracurricular activities for the next year and more will be towards the International Association for Dental Research, of which he is president-elect.

Well over 1,000 dentists study with the DENTAFACTS program to keep their knowledge up-to-date, and Dr. Greenacre's objective in his first year as editor is to double this number. The program is available only in English so far, but as it grows, Dr. Greenacre said, consideration will be given to creation of a sister program in the French language.

WINDSOR DENTIST NAMED FELLOW OF AMERICAN ENDODONTIC SOCIETY

Arthur William Lampe of Windsor, Ontario, has been named a Fellow of the American Endodontic Society. This honor was announced at the convocation ceremonies during the Society's annual meeting held recently in Las Vegas, Nevada.

Dr. Lampe is a 1951 dental graduate of the University of Toronto.

Forty-two dentists from throughout the United States and one from Canada were presented with plaques designat-

ing them as Fellows of AES during the 1976 annual meeting of the Society, which included a business meeting, a full-day seminar on the Sargenti technique of endodontics and a regional meeting.

The American Endodontic Society is composed principally of dentists in general practice who have demonstrated an interest in saving teeth through treatment of root canals, often in one dental appointment.

New Vice-Provost for Health Sciences appointed at U of T

Keigh Dorrington, professor in the Department of Biochemistry, University of Toronto, has been appointed Vice-Provost for Health Sciences.

Reporting to the Vice-President and Provost, Dr. Dorrington is responsible for the maintenance of academic programs and standards in health sciences faculties (Medicine, Dentistry, Pharmacy and Nursing), and in the School of Physical and Health Education.

The new Vice-Provost was born in Tredegar, England, in 1939. He received his B.Sc. in Biochemistry from the University of Sheffield in 1961, and his Ph.D. in Biochemical Pharmacology from the same university in 1964.

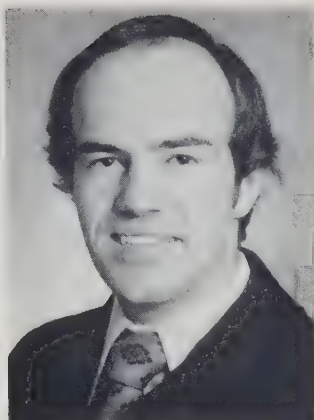
He has been with the University of Toronto since 1970, first as an associate professor in the Department of Biochemistry and Institute of Immunology, and then as a full professor in 1975.

Dr. Dorrington's general field of research is molecular immunology. He is specifically interested in gaining an understanding of the biological functions performed by antibody molecules, and in conducting chemical studies on cell membranes which carry antibodies. He is Associate Editor of the "Journal of Immunology".

His most recent administrative duties have included membership on the Science Policy Committee of the Faculty of Medicine, on the Council of the School of Graduate Studies and on the MRC Grant Committee for Immunology and Transplantation.

Academy of Paedodontics elects new executive

During the Annual Meeting of the Canadian Academy of Paedodontics, held in Edmonton, September 13, the following slate of officers was elected for the 1976-77 term: Dr. Gordon Jinks of Vancouver, president; Dr. David Kozloff of Montreal, vice-president; and Dr. Frank Pulver of Toronto, secretary-treasurer.



Hi.!

I'm Paul Greenacre. I'm a hard-working GP like most of you, with a wife, two kids, a mortgage, and patients who start at 7:30. And as if that weren't enough, I'm also editing the CDA's monthly cassette program of continuing education. We've renamed it "Dentafacts". I want to tell you about it.

First, it's new and different. There's so much happening in dentistry that continuing education is a must. But dentistry is a business as well as a profession, and there's no use learning about osseous implants if you're going bankrupt from poor practice administration. So Dentafacts is coming on strong with practice admin., staff problems, solo and partnership tips, money management and other practical business information, as well as information on a wide range of topics like new materials, new techniques, pain control, crown & bridge, and preventive dentistry.

This is information I want for my practice, and I want you to have it too. Cassettes are an easy way to get it. You can listen while driving your car, or relaxing in the evening. Cassettes don't make inroads into productive time. And provinces with relicensure requirements give study credits for Dentafacts.

So come join me with Dentafacts, by mailing the coupon below. I guarantee you'll get your money's worth - and the money is tax-deductible.

Sincerely,

Paul Greenacre

Dr. Paul Greenacre of Dentafacts
43 Eccles Street
Ottawa, Ont. K1R 6S3

- ☐ Yes, I want Dentafacts. I enclose my cheque for \$79 for a one-year subscription.
- ☐ Send me information on SONY cassette recorders at special, money-saving prices.

NAME (print) **DENTAL LIBRARY**

ADDRESS (print) **124 EDWARD ST.**

..... **TORONTO 2**

ADA PRESIDENT CALLS FOR UNITY TO MEET CHALLENGES FACING DENTISTRY

Change is coming and it is vital that all segments of the dental profession work together to meet it. This was the message presented by Dr. Robert B. Shira, outgoing president of the American Dental Association, in his presidential address to the ADA House of Delegates during the 1976 annual meeting in Las Vegas.

Dr. Shira listed the serious and complex challenges that face dentistry; diverse government pressures; the complexities of prepaid dental programs; the questions of dental auxiliary functions; and the structure and finances of the Association itself.

"One of the greatest problems facing us today is the fragmentation that is occurring within our profession," he said. "We cannot afford to squander our resources and our strength with diverse messages."

Dr. Shira said that the entire profession should present a united voice to all of dentistry's public: government, unions, industry, consumer groups, and above all, the general public.

To help with unity within the profession, he suggested, as examples, that dentistry recognize the contributions of dental auxiliaries and the fact that prepaid dental programs are here to stay.

"We must realize that in the future there is going to be more than one way to practise dentistry," he said. "Certainly private practice will survive with

solo practices, partnerships, associate-ships and group practices. There may well be ethical capitation programs, and undoubtedly there will be an expansion of the subsidized clinics to provide care for the indigent."

Dr. Shira said that the important thing is that if we wish to preserve our proven effective delivery systems, we must have input into what these changes will be in the future.

"While the concerns of the dentist are easy to identify it is much more difficult to find adequate solutions to their problems," he said. The dentist is concerned about such things as the rapid growth of prepaid dental programs, government subsidized Health Maintenance Organizations, Professional Standard Review Organizations and the threat of National Health Insurance.

Dr. Shira also cited critical financial problems which the Association faces in meeting these challenges. He told the delegates that a dues raise is critical "and you must give it your serious consideration. Never in the history of dentistry have so many pressures been applied to alter our current delivery system and the practice of our profession as we know it today.

"It is essential that we face these challenges and try to resolve them to our benefit. Inadequate financing will adversely affect our Association in many areas of its responsibilities."

DR. FRANK SHULER NEW PRESIDENT OF AMERICAN DENTAL ASSOCIATION

Dr. Frank F. Shuler of Clinton, Wisconsin, was installed as the 113th president of the American Dental Association during the ADA's annual meeting and convention held in Las Vegas, Nevada, November 14-18.

Dr. Frank P. Bowyer Jr. of Knoxville, Tennessee, speaker of the ADA House of Delegates for the past four years, was chosen president-elect, and Dr. Burton H. Press of Pittsburg,

California, was elected speaker of the House to succeed Dr. Bowyer.

During their four days of meetings the 1976 House of Delegates dealt with the heaviest agenda in number of policy proposals in the history of the Association. They adopted new policies on national health insurance and on the expansion of dental auxiliary duties, and voted \$1.1 million to combat illegal dentistry.

Trend in U.S. is to four-year program

Four dental schools in the United States recently announced a change in curriculum from a three-year to a four-year program. The schools include Loma Linda University, Medical University of South Carolina, University of Tennessee and Washington University, St. Louis.

This is indicative of a trend which is developing within dental education where the number of schools offering a three-year program has decreased in recent years from 14 to seven.

Earlier last year in line with this same trend, three other dental schools announced a similar curriculum revision: Boston University, Medical College of Georgia and University of Detroit.

Commenting on the reasons why his school which has offered a three-year program since World War II made the decision for the curriculum revision, Dr. Jack E. Wells, dean of the University of Tennessee College of Dentistry, said his administration wanted the best possible program and felt that the four-year program led to greater excellence in dental education.

"Too many changes are taking place in dentistry today to be learned in a brief time," he said. "We found that many of our students felt they did not have the time to absorb and reflect on the material presented and did not have the time to pursue a lot of the areas they would like to investigate."

At the same time, he said the faculty has complained about not having the time to re-evaluate and update courses and work on their own research activities or inservice programs.

Fellowships awarded to Ottawa dentists

Two Ottawa dentists, Dr. Walter Kindiak and Dr. Alan Buckley, have been awarded Fellowships in the Academy of General Dentistry. The presentations were made during the Academy's Annual Meeting in Las Vegas, Nevada, in November, 1976.

CDA Retirement Savings Plan

Unit value of the Canadian Dental Association Retirement Savings Plan stood as follows on December 31, 1976:

<i>Common Stock Fund</i>	\$28.241
<i>Fixed Income Fund</i>	\$18.759
<i>Guaranteed Fund</i>	\$13.252

Total assets (market value) of the plan were \$24,263,314.04.

For further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ont. M5R 2P2.

Academy of Endodontics

At its recent annual meeting in Edmonton, the Canadian Academy of Endodontics elected the following members to serve as executive officers for the 1976-77 term: P. Vanek of Ann Arbor, Michigan, president; J. Smith of Toronto, president-elect; and J. Phillips of Oshawa, Ontario, secretary-treasurer.

DEATHS

Caulfield, John Howard, 79. Ayr, Ontario. Royal College of Dental Surgeons, 1920. 5-12-76.

Kennedy, George T., 101. St. Thomas, Ontario. Royal College of Dental Surgeons, 1897. 16-11-76.

McCutcheon, James, 56. Edmonton, Alberta. McGill University, 1945. 20-12-76. Survived by Geraldine (wife), John (son) and Nancy (daughter).

Thompson, James Elmer, 89. Islington, Ontario. Royal College of Dental Surgeons, 1915. 15-12-76.

Correction

In the December, 1976, issue of the Journal we erroneously reported the death of Dr. A. J. O'Neill of Edmonton, Alberta.

We extend our sincere apologies to Dr. O'Neill for this error.

In memoriam

James McCutcheon

It is with regret that the Canadian Dental Association announces the death of James McCutcheon of Edmonton, Alberta, on December 20, 1976, at the age of 56.

Dr. McCutcheon was Dean of the University of Alberta's Faculty of Dentistry.

Born in Elizabeth, New Jersey, Dr. McCutcheon received his early education in the Province of Quebec. He was awarded his Bachelor of Arts degree by McGill University in 1942 and then enrolled in McGill's Faculty of Dentistry, graduating in 1945 with the Montreal Dental Club Gold Medal. In 1948, he received his Master of Science degree in prosthetic dentistry from the University of Michigan where he was a W. K. Kellogg Fellow.

Dr. McCutcheon was appointed associate professor of prosthetic dentistry by McGill University in 1948 and, from 1948 to 1967, served as chairman of the Department of Prosthetic Dentistry. In 1955, he was named Acting Dean of the Faculty of Dentistry and, in 1956, was named Dean, a position he held until 1970 when he was appointed Dean of the Faculty of Dentistry at the University of Alberta.

FLUORIDATION VOTE SUCCESSFUL IN PEMBROKE

Two years ago a referendum held in Pembroke, Ontario, on the issue of fluoridation was narrowly defeated by 68 votes. On December 6, 1976, the electorate of Pembroke was again asked to consider this important health measure. This time fluoridation was approved by a majority of 349 votes.

An active and dedicated citizens' committee proved to make the difference. Chaired by Kevin L. Roach, a 1973 dental graduate of the University of Toronto, and Thomas Ringland, a 1967 dental graduate of the same university, the committee included the following members: Henry Bradley, lawyer; Peter Hartland, pediatrician;

From 1956 to 1970, Dr. McCutcheon served as Dental Surgeon in Chief and Director of the Department of Dentistry of the Montreal General Hospital. He was also a member of the Medical Board and of the Medical Advisory Committee.

He was a Fellow of the Royal College of Dentists of Canada, the American College of Dentists, and the International College of Dentists. He was a member of, and served in numerous executive capacities in, the Canadian Dental Association, the Canadian Academy of Prosthodontics, the American Academy of Dental Medicine, the Fédération Dentaire Internationale, the College of Dental Surgeons of the Province of Quebec, the Montreal Dental Club and the Montreal Endodontia Society.

Dr. McCutcheon also served as a member of the Board of Health of the City of Montreal, a member of the Child Health Association of Montreal and as a consultant in prosthodontics to the Royal Canadian Dental Corps.

During his distinguished career, Dr. McCutcheon was a well-known and highly respected speaker and lecturer at dental association conventions and scientific conferences.

Alexia Delehay and Leslie Mitchell, public health nurses; Terry Harkins, school principal; Phil Schooley, accountant; Dan Stringer, pharmacist; Charles Taylor, engineer; James Monro, dentist; Irene Sheremata, nutritionist; M. vanVeldhoven, medical health officer; and five lay people, Bruce Valance, Marg Steinberg, Fran Work, Vicki MacDonald, and Mrs. Mitch McEwen.

In reporting the results of the referendum, Dr. Roach expressed the committee's thanks to Lloyd Bowen, Fluoridation Officer for the Canadian Dental Association, for his assistance and to the CDA for providing the necessary literature at cost.

HARVARD SCHOOL OF DENTAL MEDICINE ANNOUNCES NEW POSTDOCTORAL OPPORTUNITIES IN HEALTH CARE DELIVERY

Dr. Paul Goldhaber, Dean of the Harvard School of Dental Medicine, announces the availability of new postdoctoral opportunities in health care delivery to start July 1, 1977; these programs are offered in addition to the existing postdoctoral programs that combine advanced clinical dentistry and biomedical research.

The new opportunities will combine advanced clinical dentistry with in-depth study and research in public health, public policy or management in collaboration with the Harvard School of Public Health, the Harvard Medical School, the John F. Kennedy School of Government, and the Harvard Graduate School of Business Administration. The aim of these new programs is to produce broadly educated clinical scholars, not only expert in a clinical field but knowledgeable in public health principles, management, and

public policy. It is anticipated that such clinicians will assume leadership roles in the dental profession.

"These new programs have been designed in response to the rapidly changing nature of public policy in the area of health care and health care delivery systems and to the need for dentists who are better prepared to effectively and efficiently meet the needs of the public," Dr. Goldhaber explained.

"The programs will be particularly valuable to dentists with career goals that include planning and administration of oral health care delivery for private enterprise or public agencies; public policy planning and development of health legislation; private individual, partnership, or group practice; or full-time research and teaching.

"Each program is composed of three major components: clinical training in

either general dentistry or a dental specialty, course work for the degree of Master of Public Health, Master of Public Policy, or Master of Business Administration; and research related to the broad area of health care delivery."

Upon successful completion of all requirements, a student will receive a certificate in addition to the appropriate Master's degree. Clinical areas in which the certificate may be awarded include either: general dentistry, oral diagnosis and radiology, oral medicine and pathology, orthodontics, periodontology, prosthodontics, pediatric dentistry, endodontics, or dental public health.

Applications and requests for further information may be obtained from the Chairman of the Committee on Postdoctoral Education, Harvard School of Dental Medicine, 188 Longwood Avenue, Boston, Massachusetts.

IMPACT, RESPONSE, RESULTS when you advertise in The Journal of The Canadian Dental Association

PRIME EXPOSURE FOR
YOUR ADVERTISING

HIGHEST CIRCULATION
FIGURES IN CANADA

UNIQUE, WELL-PLANNED
EDITORIAL PROGRAM

EVERY ISSUE BILINGUAL

TOP QUALITY REPRODUCTION

COMPETITIVE RATES



Contact Business Manager:
JOURNAL OF THE CANADIAN
DENTAL ASSOCIATION
1815 Alta Vista Drive, Ottawa
Ontario K1G 3Y6
Telephone: (613) 523-1770



SIEMENS

Now we have it for you...

Efficiency, convenience, flexibility and comfort — your practice requires the maximum of each.

From an awareness of your requirements Siemens has designed the ultimate patient chair and instrument delivery system.

SL3 Patient Chair

- harmonious in form and function with flexible positioning and easy controls.
- designed for the comfort of both doctor and patient.

S5 Instrument Delivery System

- compact and easily adjustable to your working posture, standing or sitting.
- modular system permits you to select the instrumentation package you need.
- instruments are always accessible and easy to reach.



SL3 Patient Chair

S5 Instrument Delivery System

For further information contact your dealer; or write or call Siemens Electric Limited
George Grignon
7300 Trans-Canada Highway
P.O. Box 7300 Pointe Claire
Quebec H9R 4R6
Tel.: (514) 695-7300

Les actualités dentaires

LE PAUL GREENACRE EST NOMME NOUVEL EDEITEUR DU PROGRAMME AUDIO CASSETTE DE L'ADC

Le Dr Paul Greenacre d'Ottawa vient d'être nommé au poste d'éditeur de la section audio cassette dans le cadre du programme d'éducation permanente de l'ADC. Sa nomination, qui entre en vigueur le 1er janvier 1977, a été annoncée conjointement le 11 septembre 1976, par l'ADC et Medifacts Ltd.

Le Dr Greenacre succède au Dr George S. Beagrie qui a servi à titre d'éditeur depuis l'introduction du programme audio cassette en 1971; toutefois, Dr Beagrie continuera à être associé à ce programme à titre de président d'un conseil consultatif de rédaction récemment reconstitué.

L'ADC et Medifacts ont accepté avec regret la décision prise par le Dr Beagrie, éditeur depuis six ans, bien qu'ils comprennent fort bien les nouvelles pressions exercées sur lui depuis qu'il a été promu au poste de directeur de la division des études dentaires post-universitaires à l'Université de Toronto et nommé au poste de président entrant de l'Association internationale de recherche dentaire.

L'ADC et Medifacts ont sélectionné le Dr Greenacre parmi un nombre de candidats, tous possédant des qualifica-

tions imposantes, pour son dynamisme et son enthousiasme, son expérience en matière de rédaction, son dévouement aux domaines d'éducation permanente et de dentisterie préventive, ainsi que pour la diversité des méthodes qu'il emploie au cours de l'exercice de sa profession. Compte tenu de la combinaison de telles qualités, Dr Greenacre promet d'être l'éditeur admirablement compétent qui saura concevoir un programme dont l'attrait gagnera l'intérêt de nombreux dentistes.

Né à South Porcupine, Ontario, en 1947, Dr Greenacre a fait ses études à la faculté dentaire de l'Université McGill. Pendant qu'il faisait ses études, il était co-éditeur ainsi que rédacteur d'articles pour le McGill Dental Review et s'occupait également de la promotion de fluoruration et de programmes de dentisterie préventive organisés à Montréal. A l'obtention de son diplôme, il s'est engagé dans l'armée à titre de dentiste militaire préposé à la dentisterie préventive à la BFC, Ottawa. Au cours de cette période il a écrit le scénario, réalisé et exécuté le montage d'un film ayant trait à la dentisterie préventive. Il a également écrit et fait de nombreuses

conférences traitant de ce même sujet. Il a servi au sein de l'exécutif de la Société dentaire d'Ottawa à titre de relationniste.

Par la suite, il fut nommé à Kingston, Ontario, à titre de dentiste militaire au Collège militaire royal et au Collège de la défense nationale et il écrivait alors toujours des articles traitant du domaine de la dentisterie. Il fut plus tard affecté au Royal 22ème Régiment en Europe pour soigner les troubles dentaires des hommes. C'est à cette époque qu'il a créé une émission-causerie à la radio; un test de 30 secondes permettant de mesurer la plaque dentaire, dans le cadre d'un programme de la santé publique; une méthode de suppléer efficacement aux insuffisances de fluorure.

Depuis qu'il a quitté les forces armées, le Dr Greenacre exerce dans un cabinet dynamique, orienté vers la dentisterie préventive, en association avec le Dr Manning Norman d'Ottawa. Ses activités couvrent toute la gamme des procédures dentaires; dentiste généraliste dévoué, il reconnaît l'importance que doivent accorder les généralistes à leur familiarisation avec les tout dernier progrès de la profession.

Editorial . . .

Suite de la page 50

Les solutions possibles consisteraient soit à éliminer le guide d'honoraires soit à ne pas imprimer le signe "dollars" dans le guide. Une autre solution consisterait à étendre l'échelle des honoraires payés pour certains traitements spécifiés.

Au cours de l'assemblée du Bureau des gouverneurs tenue à Edmonton en septembre dernier, nous avons réservé une journée aux discussions ayant trait à la nouvelle constitution, celle qui régit aujourd'hui notre association. Le Bureau a également approuvé une augmentation annuelle de \$25 par membre, portant la cotisation de \$65 à

\$90. Cette augmentation améliorera considérablement la situation financière de l'ADC.

L'un des points qui a été approuvé à Edmonton, mais auquel on n'a accordé que peu de publicité se rapportait à une nouvelle méthode de rendre honneur aux membres de la profession — ou autres — qui ont fait une contribution importante. Nous discernons depuis longtemps des grades de "membre honorifique", mais à partir de maintenant, nous présenterons également un certificat de Service distingué et un certificat de Mérite. Ce dernier sera présenté aux membres du Bureau des

gouverneurs et aux présidents du conseil à l'issue de leur mandat.

J'ai essayé de vous donner une perspective générale de la situation, telle qu'elle est aujourd'hui, ainsi qu'un court résumé de certains problèmes auxquels nous devons faire face. Il existe, bien entendu, maints autres problèmes, et puisque j'ai, de temps en temps, l'occasion de m'entretenir avec vous, nous pourrions peut-être aborder ces diverses questions et également nous étendre sur celles que je soulève au cours de cet éditorial.

Michael J. Crompton
Moncton, Nouveau Brunswick



Bien petite étiquette. Déclaration bien importante.

...qui signale que:

Les laboratoires dentaires ont utilisé l'une des meilleures céramiques au monde pour la fabrication des ponts et couronnes de porcelaine-sur-métal.

La teinte est parfaitement similaire à celle qui apparaît sur le guide de teintes Trubyte® Bioform®. Cette similitude est due au fait que les céramistes qui ont créé les teintes du guide Bioform, ont apporté le *même* soin à la création des teintes pour la porcelaine Biobond.

Les restaurations de porcelaine-sur-métal disposent d'une très grande résistance—et d'une beauté durable qui ont fait de la porcelaine Biobond, un symbole de qualité.



Utilisez votre guide
de teintes Trubyte® Bioform®.



Prescrivez "porcelaine Biobond".

DENTSPLY TRUBYTE®

Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1976 Dentsply International, Inc.
Tous droits réservés.

L'EDITORIAL DU "WINNIPEG FREE PRESS" CRITIQUE SEVEREMENT LE REGIME DE SOINS DENTAIRE POUR LES ENFANTS DU GOUVERNEMENT DU MANITOBA

Un éditorial qui a paru récemment dans le "Winnipeg Free Press" critique sévèrement la façon dont le gouvernement gère le nouveau régime de soins dentaires destiné aux enfants de la province. L'éditorial, qui délimitait les divers problèmes, appuyait l'attitude adoptée par l'Association dentaire du Manitoba et conseillait aux Manitobains d'examiner soigneusement les objections que portent les dentistes de la province à ce régime.

Nous estimons que cet éditorial intéressera également tous les dentistes du Canada et, avec l'autorisation de Monsieur Peter McLintock, éditeur du "Winnipeg Free Press", nous présentons ci-dessous cet article.

"Les Dentistes Se Font Mordre"

"On se demande pourquoi les Manitobains doivent payer trois fois plus pour le nouveau régime gouvernemental 'gratuit' pour les enfants qu'ils n'auraient payé pour obtenir des services de qualité supérieure offerts par l'Association dentaire du Manitoba. Pourquoi les chiffres en question ne font-ils surface que maintenant, à la veille de la mise à exécution du régime pilote gouvernemental alors qu'ils auraient dû être publiés il y a longtemps, afin que la réaction du public indique bien au gouvernement son opposition à des coûts aussi élevés pour l'obtention de soins de qualité inférieure?"

"La question des retards portés par le gouvernement à la publication des coûts en question s'explique facilement. Le Dr Ralph Crawford, président de l'Association dentaire du Manitoba, a déclaré que l'Association a été non seulement prévenue, mais elle a même été menacée par le gouvernement que toute campagne publicitaire de grande envergure lancée par les dentistes leur ferait perdre envergure lancée par les dentistes leur ferait perdre tout pouvoir de négociation.

"Aujourd'hui, munie de ce que le Dr

Crawford appelle 'une parfaite perception des événements passés', l'Association estime qu'elle n'aurait jamais dû tenir compte de cette menace et qu'elle aurait dû plaider sa cause directement auprès du public. Dr Crawford souligne que malgré les pourparlers sans fin qui ont eu lieu entre les représentants du gouvernement et l'Association, cette dernière n'a jamais réussi à faire adopter soit un point de vue soit un conseil quelconque, ou même à faire reconnaître le souci professionnel qu'elle éprouve à l'égard du nouveau régime gouvernemental.

"Tout en faisant preuve d'une ressemblance marquée à la tactique employée par le gouvernement lors de la mise en application du régime d'assurance automobile obligatoire, une fois de plus, celui-ci a suivi une ligne rigide pour mettre en oeuvre, sans tenir compte d'aucune suggestion, le régime qu'il avait proposé à l'origine. Toutefois, dans ce cas, le public n'a pas exprimé son opposition, probablement parce que le gouvernement, conscient de ses erreurs passées, a réussi à museler les dentistes sous le prétexte de leur demander de se conduire en 'gentlemen' — ce qu'ils ont fait — pour réaliser, par la suite, que ce comportement était entièrement unilatéral.

"Par conséquent, à l'aide de sept infirmières formées au Saskatchewan, le gouvernement lancera à partir de cette année, dans la région de Gimli, son régime pilote pour les enfants âgés de six ans. Plus tard, il espère pouvoir fournir, au moyen de cliniques scolaires, des services dentaires aux enfants âgés de six à douze ans. Les dentistes s'opposent au régime et nous invitons les Manitobains à examiner soigneusement leurs objections. Jusqu'à présent, personne n'a expliqué comment ces cliniques scolaires pourront traiter les cas d'urgence qui surviennent pendant les fins de semaines ou au cours des mois d'été, lorsque les cliniques gouvernementales seront fermées. Per-

sonne n'a su expliquer, non plus, de manière satisfaisante, la situation créée par le régime et dans le cadre de laquelle les enfants ne subissent qu'un examen et diagnostic initial, faits par le dentiste; par la suite, le patient pourrait, pendant six ans ou plus, ne se faire traiter que par une infirmière dentaire.

"Les enfants constituent environ 40% de la clientèle d'un dentiste rural, et il faut croire que le gouvernement n'a nullement prévu la situation anticipée par l'Association dentaire, qui estime que sans cette portion de leur clientèle, les dentistes ruraux seront obligés de quitter leurs villages et ainsi, priveront d'un accès facile aux services dentaire tous ceux âgés de plus de douze ans.

"Le gouvernement du Manitoba destine à la première année d'application de son régime, une somme de \$500,000 et envisage fournir 1,500 traitements, ce qui revient à \$330 par patient; l'on suppose que ce chiffre comprend les frais de mise en oeuvre du programme. Dans la province de Saskatchewan, où un régime semblable a été adopté il y a quelques années, le coût annuel pour chaque patient s'élève de \$200 à \$285. L'Association dentaire du Manitoba estime qu'elle pourrait organiser des services communautaires (non seulement scolaires) et soigner les enfants de la province à raison d'une moyenne de \$100 par an.

"Les Manitobains devraient soigneusement examiner un autre aspect du régime. Pour la première fois dans le domaine des services médicaux de la province, le patient n'aura pas la liberté de choisir. Cet état de chose ne se produira pas immédiatement mais si, comme le prévoit l'Association dentaire, le régime renverse la tendance actuelle qui consiste à consulter des praticiens ruraux de plus en plus hautement qualifiés, les Manitobains qui n'ont pas la chance de vivre dans des milieux urbains, n'auront qu'une source de traitement à leur disposition: celle offerte par l'infirmière dentaire désignée par le gouvernement."

LE 1ER MARS 1977: NOUVELLE DATE LIMITE POUR LA SOUMISSION DES DEMANDES DE BOURSE DU FCED POUR LA FORMATION DE PROFESSEURS

Le Fonds canadien pour l'enseignement dentaire vient d'annoncer qu'il accepte maintenant les demandes de bourses pour la formation de professeurs, pour l'année universitaire 1977-78.

Le 1er mars 1977 est le dernier délai pour la soumission des demandes. Prière de s'adresser au bureau du doyen des écoles dentaires canadiennes ou au Fonds canadien pour l'enseignement dentaire, suite 205, 44 ouest, avenue Eglinton, Toronto, Ontario M4R 1A1, pour obtenir les formules d'inscription et tout renseignement supplémentaire.

Les candidats doivent être citoyens canadiens ou posséder le statut d'immigrants reçus. Ils doivent avoir suivi jusqu'au baccalauréat un programme dentaire ou d'hygiène dentaire, ou un programme en sciences, et doivent être admissible au programme post-universitaire.

Les candidats doivent s'engager à accepter un poste de professeur ou de chercheur dans une faculté dentaire ou une école d'hygiène dentaire du Canada. Préférence sera accordée aux candidats qui se dirigent vers une carrière de professeur/chercheur. L'engagement minimal, dans le cadre

de cet accord, est de deux jours par semaine. Le bénéficiaire d'une bourse est tenu d'enseigner à plein temps pendant un an, pour chaque année d'obtention d'une pleine bourse, ou d'enseigner à demi-temps pendant un an pour chaque année d'obtention d'une bourse partielle (50%). Lorsque le bénéficiaire d'une bourse ne peut remplir ses obligations d'enseignement, le montant de la bourse obtenue sera remboursé dans sa totalité.

Chaque bourse équivaut à une année d'études au niveau post-universitaire. La bourse est renouvelable lorsque les progrès du candidat sont jugés satisfaisants.

Le FCED décerne tous les ans des bourses des deux catégories suivantes:

- (a) Une pleine bourse du FCED: décernée aux candidats qui s'engagent légalement ou par l'entremise du doyen d'une faculté à enseigner à plein temps à la fin de la période de formation.
- (b) une bourse partielle (50%) du FCED: décernée aux candidats qui s'engagent légalement ou par l'entremise du doyen d'une faculté à enseigner à demi-temps à la fin de la période de formation, ou encore

à des étudiants inscrits à un programme de sciences fondamentales (celle-ci ne constitue une valeur monétaire que si l'étudiant obtient un poste universitaire à la suite de la période de formation).

Le montant des bourses sera fixé tous les ans par le Comité consultatif sur le Choix des candidats et le Conseil des administrateurs du FCED.

Les bénéficiaires de bourses du FCED seront tenus d'obtenir des moyens supplémentaires d'existence de différentes autres sources pour financer en totalité leurs études. Toutefois, un candidat ne pourra obtenir une bourse du FCED s'il a déjà une autre bourse d'importance (en général, plus de \$8,000).

Depuis l'inauguration du programme en 1964, le Fonds a offert à 107 dentistes, 163 bourses s'élevant à \$416,239; ces bourses étaient destinées à les aider à embrasser une carrière dans l'enseignement et la recherche. Dix-sept bourses, s'élevant à \$22,378 ont également été distribuées à 12 hygiénistes dentaires dans le but de les aider à se préparer à une carrière d'enseignant dans une institution canadienne.

L'AMERICAN DENTAL ASSOCIATION ENGAGE LA LUTTE CONTRE LA DENTISTERIE ILLEGALE

Au cours de son assemblée annuelle de 1976, la Chambre des délégués de l'American Dental Association a engagé la lutte contre l'exercice illégal de la profession dentaire. Les délégués ont demandé au Conseil d'allouer une somme de \$1.1 million en provenance des réserves à cette fin.

La résolution adoptée par la Chambre est conçue de la manière suivante:

- Tout les américaines doivent avoir accès à des services dentaires fournis par des professionnels du domaine de la santé de haute compétence et dont la formation professionnelle est adéquate.
- Les dentistes sont chargés de fournir les soins relatifs aux dentiers, et les délégués s'opposent fermement à la

fourniture de soins inadéquats offerts uniquement par des personnes dont la formation et la compétence laissent à désirer.

● L'American Dental Association et les organismes dentaires qui en font partie doivent immédiatement faire les démarches nécessaires en vue d'identifier, au sein de leur juridiction, les diverses barrières, économiques et autres, qui constituent des obstacles à l'obtention de traitements dispensés par des professionnels compétents; ils doivent également trouver les solutions visant à éliminer ces obstacles.

La Chambre a également adopté, à titre de guide pour la profession, des directives s'appliquant aux soins sui-

vants la mise en bouche de prothèses amovibles complets ou partiels. La Chambre des délégués a convoqué une assemblée au début de 1977 pour traiter de dentisterie illégale; elle a également adopté les définitions révisées suivantes pour les termes "denturologiste" et "denturologie".

Denturologiste: personne qui, lorsqu'il s'agit de respecter les règles de protection efficace du public, ne possède ni les qualifications ni le permis d'exercer nécessaires pour pratiquer une branche quelconque de la profession dentaire.

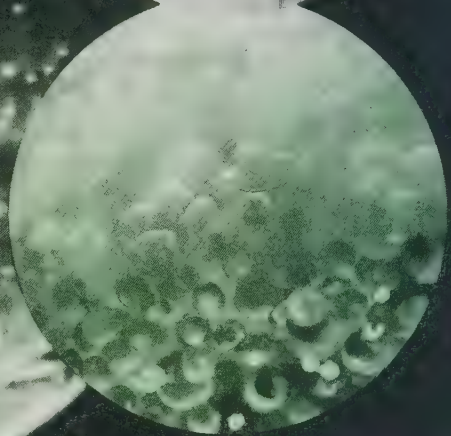
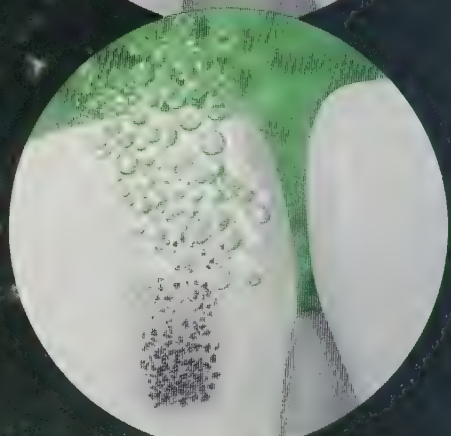
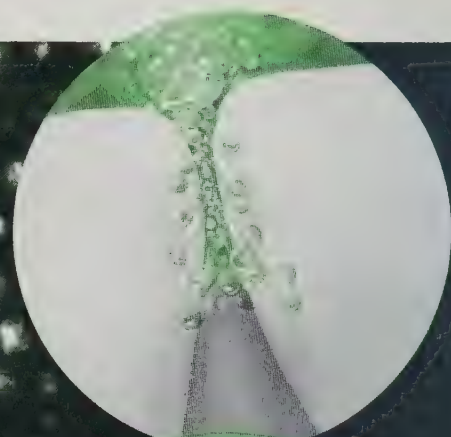
Denturologie: l'exercice non qualifié ainsi qu'illégal de toute branche de la profession dentaire.

Reformulated Polident® Tablets help clean tough denture stains as easy as...

1. Anionic detergency
active ingredients penetrate
stains and plaque that adhere
to the denture

2. Powerful chemical action
changes calculus binders to
more soluble material; deposits
disintegrate

**3. 50% more effervescent
cleaning action**
to better help clean away stains
and odor-causing debris



Reformulated POLIDENT in conjunction with regular brushing will help keep dentures clean and odor-free.

**Recommended by
more dentists
than any other
soaking cleanser.**



RESPONSIBILITY THE KEY WORD IN COPING WITH SOCIETY'S NEW CHALLENGES

**Convocation address by Dr. William G. McIntosh,
former Executive Director of the Canadian Dental As-
sociation, to the Royal College of Dentists of Canada,
September, 1976**

A guest speaker would be foolhardy to come before a group of distinguished leaders in their chosen profession, such as the members of the Royal College of Dentists of Canada, to identify, or propose solutions to, their specific professional problems. I have no desire to willingly play such a role. What I would like to do is direct your thoughts for a few minutes along two other channels, both of which, in my view, merit careful consideration by dentists and dental organizations.

The first of these has to do with recent changes in society's attitude to health services and their delivery. The second explores the responsibility of the individual health professional in coping with these changes.

Our present social order is being challenged on many fronts. Communities everywhere are confronted by challenges with respect to their natural environment, to their relationships with other men and to the modern expectations of the quality of life. As one author states it, "The world is passing through a period of unsettlement due to automation, computerization, the population increase, pollution of air, water and land, and the rising expectations of people in the developed as in the underdeveloped countries. We are confused by a surfeit of theories about our thinking, so that the chances seem dim of a human being surviving a combination of complexes, reflexes, glands, sex and traffic."¹

The particular challenge to which I refer is that created by society's change in attitude from concern for the well-being of the individual and self interest groups to that for the community as a whole. To begin, let me remind you of some of the prevalent public attitudes that are today being brought to bear — with considerable force — on the dental profession.

(1) Many communities now place heavy responsibility on the dental profession to make dental services available to all who need them. They consider access to dental service a right of the individual, regardless of his station in life. They expect the quality of service to be high and the cost reasonable whether financed by the individual or by his community. They have the capability, as we already know,

to introduce their own treatment programs with or without the support of the profession.

(2) Associated with the public's cries to have quality dental services made available to all, public attention is also turning to the continued competence of dental practitioners to provide quality care. When the profession is slow to respond or points out the difficulties with a total compliance with the public wish, the public cries "bias", and "protectionism".

(3) In many legislative jurisdictions, the dental licensing boards and discipline committees, formerly made up entirely of dentists, must now include lay representatives.

(4) So-called self-governing professions, including dentistry, should not, according to repeatedly heard public statements, be entitled alone to define standards for entry to that profession.

(5) Neither should they have statutory control over others who are not members of that profession — for example, dentists over hygienists, dentists over dental mechanics — except for matters of work supervision.

(6) Supporters of Canada's Competition Act claim that fee guides for professionals contravene the principle of open competition. Some are even advocating that professionals should openly advertise their fees.

(7) Yet another idea supported by a growing segment of many communities is that physicians and dentists should be compelled to work in community health centres on salaries.

These few examples of public interference are sufficient to show that there is a new community interest in dental services and how they are provided. There are others. Canada's Medical Act states that health services must be universal and comprehensive. The Honorable Mr. Marc Lalonde, Minister of National Health and Welfare, strongly stresses the community concept in his recent book entitled *A New Perspective on the Health of Canadians*, in which he states that the health field has four broad elements, Human Biology, Environment, Life Style, and Health Care Organization. "There is little doubt," says Mr. Lalonde,

"that future improvements in the health level of Canadians lie mainly in improving the environment, moderating self-imposed risks and adding to our knowledge of human biology."

The social order of the 1970's expects and is striving for a quality of life unparalleled in any previous period in history. The measures of success, as well as the degree of success, obviously vary widely from one culture to the next. In one, the objective may be more leisure time to enjoy in aesthetic surroundings. In another, it may be food to fill swollen, empty bellies. In yet another, it may be medicines to alleviate other forms of human suffering. Diverse as these objectives are, they have a common basis: people's concern for people; help for the many rather than the few; emphasis on the community rather than the individual.

Spell-binding example of community effort

One of the most spell-binding examples of community effort that I have heard or read about in a long time is the story of the prevention and treatment of blindness around the world. I first heard the story from Sir John Wilson, a blind man since the age of twelve, head of The British Institute for the Blind, when he spoke to a luncheon meeting in Toronto. He is a brilliant speaker. His word pictures vividly told of the anguish and suffering of at least 10 million blind people in the world today, for whom two-thirds of their blindness is estimated to be preventable or curable. He told of the community efforts now in progress to eliminate the blackfly which is responsible for so-called river blindness in one million people out of a farming population of 10 million along certain rivers in Africa. He told of medical teams preventing and treating trachoma, often with simple applications of antibiotics. In some sections of India 60 to 80 per cent of the population suffer from this dread disease. It was fascinating to listen to Mr. Wilson tell of the surgical techniques used to eliminate cataracts which are extremely prevalent in India and other parts of the world. He told of the Indian surgeons being so skilful with their specialized surgical techniques, that a cataract operation which will restore sight to a blind person is often done in a matter of minutes. In fact, he reported that at one community clinic in India nearly 30 cataract operations an hour are performed with from 90 to 94 per cent success. One surgeon is reported to have done 82 successful operations in one day. The surgeons are, of course, aided by many auxiliary health workers, their only training in most instances being what they receive on the spot. With such community or group efforts millions of people in Africa, India and South America are having their sight restored.

Many more millions are saved from a world of darkness by preventive measures. In these communities we are told 50 cents will treat a case of trachoma, five dollars will remove a cataract, and 12 cents will buy enough Vitamin A to protect a child from xerophthalmia for a year.

Should any of you be interested in reading further details of this intriguing story, the March 1976 issue of *World*

Health, the magazine of the World Health Organization, is entirely devoted to it.

It is quite obvious that the principles involved in the eye care programs in these southern poverty-stricken countries are not directly applicable to dental care in Canada. On the other hand, the ideas of community dental clinics, preventive and therapeutic dental plans directed at total population groups, and specialization in dentistry for the purpose of improved efficiency are not foreign to Canadian thinking. The 64 dollar question is, how far along each of these lines is it advantageous for our community to go? How far will our society force us to go?

Attempts at answering these questions bring us directly to the second line of thought. Does the individual professional have a responsible role in finding acceptable answers to these big questions or does he leave that to someone else? Is he too busy serving his individual patients to be concerned with the community as a whole? Are there others more qualified than the dentist to identify and care for the dental needs of his community?

I expect we would all agree that the answer to each of these questions is an emphatic *no!* And yet we have just been reminded that there is considerable evidence pointing to the fact that dentists are not the persons who are currently making many of the major decisions as to when, how and even by whom dental services are to be provided.

No doubt the reasons for this difference are numerous and complex. Among them, if I may be so bold to suggest, is the reluctance on the part of the dental profession to try to set in motion plans aimed at meeting tomorrow's needs in preference to concentrating on measures to meet today's requirements which, in this rapidly changing society, are so often out of date before the measures are implemented. Another reason I suggest is the difficulty the profession seems to have in remembering the forcibly enunciated expectations of the public with regard to its health services and the significance of these expectations in the final determination of the services the community will ultimately receive.

What is the role of the individual?

Whatever the reasons, independent actions by dentists, no matter how well conceived, are unlikely to result in the community programs now being demanded by the new social order. What then is the role of the individual professional in facing the challenge of the public's expectations while, at the same time, maintaining the professional ethics and standards which distinguish a true profession from a trade?

It will not be an easy role. It will require individuals working together for the common good. It will require vision. The role will encompass social responsibilities to recognize the true social issues confronting the profession, personal commitment to public service rather than private advantage, and a dedication to continuing high standards of training and performance. While the needs of the new social order will be met one way or another, they will best be met

by professionals recognizing their individual responsibilities, while not forfeiting their professional independence. As the Honorable Mr. C. McRuer said in his Royal Commission on Civil Rights Report, "Plainly merely belonging to a group with the right to govern itself does not make a professional man. The professional man must retain a position of independence; he undertakes to serve but he cannot enter into servitude."

In years past a person's success and prosperity were visibly and directly related to the degree of intelligence, industry and responsibility which he devoted to his work. Unfortunately in the complexity of today's industrial society, many of the once obvious relationships between cause and effect are in the process of disappearing. One of these relationships has to do with personal responsibility. It is intelligent people, acting responsibly, who have made free nations strong. Not pressure groups acting selfishly, nor moral cowards seeking refuge in the crowd.

We must be aware of fanatical people with dreamer's eyes who desire change for the amusement they find in pulling things to bits. They make a pandemonium and call it progress. They try to induce and, in some cases, coerce individuals to relinquish their rights and to abdicate their responsibilities.

Decline of personal responsibility

We have all seen these forces at work. We have witnessed how the decline of personal responsibility spawns many ills, including juvenile and adult delinquency as well as moral lapses of large groups.

"It would seem there is need to re-awaken in us a sense of responsibility not only for our fortunes, but also for the force and direction of groups with which we identify ourselves. However, identification with a group is only a first step. The evolution from nominal identification to full responsibility can be traced by the successive application of four old questions as directed at a problem:

Why doesn't somebody?

Why don't they?

Why don't we?

Why don't I?

"One is not fully identified with a group until he feels in his heart the pressure and the pull, the pain and hopefully the pride of his own responsibility for group action. The 'Why don't I?' question is the badge of the free man, the 'Why don't they?' is the badge of the serf."²

Dr. J. B. Macdonald, an honorary fellow of this College, described the problem of personal responsibility in these clear terms:

"Responsibility is the key word. It is probably the most important word of modern ethics. We all admire responsibility but we have difficulty knowing where it begins and where it ends. We reward enthusiastically a social sense of responsibility but we are uneasy lest it represent merely a conditioned pressure to conformity that we deplore. We admire the sense of responsibility of the rugged individualist

who can go his own way against the current in response to individual conscience. But, again, we wonder uncomfortably how much his conscience and courage are a product of social conditioning. In spite of the unprecedented opportunity to control his environment, man has never been more lost, never less sure of the difference between right and wrong, never more uncertain about the meaning of life, never more frustrated in recognizing and meeting his responsibilities."³

Society's expectations changing

Here then are the points I have tried to make. Society's expectations of the health professions, including the dental profession, are changing. Public emphasis is more on the advancement of the community than on self interest groups. Group actions are necessary to meet society's new challenges to the dental profession but they must be group actions based on the accumulated wisdom of individual professionals who want to maintain their professional independence and at the same time fulfil their individual and collective responsibilities to the needs of their community.

I know you, the members of the Royal College of Dentists of Canada, who have already identified yourselves as leaders in the dental profession will readily recognize the significance of society's new challenges to the profession. You will recognize your individual responsibilities. You will provide the leadership necessary to analyze the new problems. You will help implement the appropriate actions to meet the needs of both the community and the profession.

When one looks at professional organizations such as the RCD(C), there is much reason to believe that membership in a professional body requires or breeds a special sense of responsibility to society, a greater than ordinary willingness to place principles before expediency or personal advantage. If there is, it should be identified and efforts should be made to preserve and to strengthen such qualities. Because it should be obvious to all who will think that a profession which seeks freedom from responsibility eventually ends up with freedom from freedom itself.

My concluding sentences are taken again from The Honorable Marc Lalonde when he wrote, "Whatever happens with respect to social policy will be a consensus — the consensus of Canadians as to the social security system they want us, their representatives, to provide them with. If the result is a program that is both fair and generous, both responsible and compassionate, an equitable embodiment of an enlightened society, then the credit will belong to all of us. If the result is none of these things — or merely less so than it might and should have been — then that too will be a responsibility we all will share. The Canadian society of tomorrow will be as we choose to build it today."

1 On coping with change. The Royal Bank of Canada Monthly Letter. Vol. 51, No. 12.

2 Louis P. Shannon. The Disappearance of the Obvious. Journal of the San Antonio District Dental Society. March 1967.

3 John B. Macdonald. Excellence and Responsibility. Inaugural address as President of the University of British Columbia. October 1962.

FEDERAL INCOME TAX RETURNS BY DENTISTS

This article was prepared by Thorne Riddell & Co., Chartered Accountants, to assist dentists in the preparation of their annual tax returns.

The time of the year is again approaching at which we have to determine exactly what share the government will demand of our hard-earned income. The question is — do we owe the taxman, or, slightly more palatable, does he owe us?

Preparing a personal income tax return is not an enjoyable task, partly because of the psychology, and partly because of the tedious job of gathering applicable information, consolidating it, finding appropriate documentation, and finally, incorporating all the information in the tax return.

It is impossible to solve the psychology problem so this article will attempt only to guide you through the final step; that of preparing the tax return, and suggest some means which may help reduce your tax liability.

The article deals with the basic steps involved in tax return preparation. In summary, the basic steps involved are: (1) calculating gross professional income from which professional expenses are deducted to arrive at net professional income; (2) determining income from other sources; and, (3) deducting certain amounts from the total of the above to arrive at net income for income tax purposes. Certain other amounts are then deducted from net income for income tax purposes in order to arrive at taxable income, the basis for computing taxes payable.

In order to simplify the discussion,

we have attempted to reference the discussion to an actual tax return copy.

The article will assume the dentist is self-employed. Certain exceptions applying to partnerships and dentists on salary will be mentioned briefly later in the article.

1. Computation of net income from self-employment

Professionals are required to compute their income on an accrual basis. This requires taxpayers to include in income, accounts receivable and work-in-progress, and to deduct amounts in respect of accounts payable outstanding at the end of each year. A taxpayer may elect to exclude work-in-progress (a modified accrual method). The election is made once and is binding for all subsequent years unless it is revoked with the concurrence of the Minister of National Revenue.

The accrual method of reporting gross income was first introduced into the Income Tax Act in 1972. As a transitional provision in the conversion from a cash basis of reporting income to an accrual basis, there is a special rule for the treatment of a professional's accounts receivable outstanding at the end of 1971. For each year after 1971, the professional has been allowed to deduct a reserve for his 1971 accounts receivable equal to the lesser of (1) the amount of the previous year's reserve for 1971 receivables (in 1972, this amount was the actual amount of 1971 accounts receivable), (2) the amount of accounts receivable outstanding at the end of the current period.

Each year he is required to add-back

the amount of the prior year's reserve and compute a new reserve for the current year.

A separate schedule should be prepared and filed with the tax return similar to the following example.

Gross income	\$50,000
Add 1971 Accounts receivable reserve deducted in 1975	5,000
Deduct	
Lesser of (1) 1975 reserve included in income (as above)	\$5,000
(2) amount of net accounts receivable at December 31, 1976 = \$3,000 (3,000)	
Gross income	\$52,000
<i>(See item A on tax return)</i>	

The schedule above would then continue to deduct expenses in order to arrive at net income from self-employment. To be allowable, expenses must have been incurred for the purpose of gaining or producing the gross income and have been paid or become payable in the year provided that they were not deductible in a prior year. They must also be reasonable in amount.

The expenses should be categorized as distinctly as possible, so that the sundry expense category is minimal. Documentation of the expenses should be maintained in the event that tax authorities request support for reported expenses. The following expenses are among those deductible:

- (1) Dental and like supplies.
- (2) Salaries of dental assistants and office help. These should be reported on a calendar year basis on forms T4-T4A Summary and T4 Supplementary. The deadline for filing these forms

Please do not
use this area

2 Calculation of Net Income

"C"

		\$	¢
Income from Employment	Total Earnings Before Deductions from Box C on all T4 slips (attach copy 2 of T4 slips)	01	
	Commissions from Box L on all T4 slips, included in above total	02	
	Other employment income including adult training allowances, tips and gratuities, etc. (Guide item 3; please specify)	03	
	Total employment earnings (add lines 01 and 03)	04	
	Subtract:		
	3% of 'Total employment earnings' (line 04 above) — maximum \$150 (Guide item 4)	05	
	Other allowable expenses (Guide item 5; please specify)	06	
	Total employment expenses (add lines 05 and 06)	07	
	Net employment earnings (subtract line 07 from line 04)	08	
Pension Income	Old Age Security Pension (\$1,634.34 for year; for less than year, see Guide item 6)	09	
	Canada or Quebec Pension Plan benefits (attach copy 2 of T4A(P) slip)	10	
	Other pensions or superannuation (attach copy 3 of T4A slips)	11	
Income from Other Sources	Taxable Family Allowance payments (Guide item 7; attach copy of TFA1 slip)	12	
	Unemployment Insurance benefits (attach copy 1 of T4U slip)	13	
	Taxable amount of dividends from taxable Canadian corporations (attach completed Schedule 4)	14	
	Interest and other investment income (attach completed Schedule 4)	15	
	Rental income (Schedule 7) Gross	16	
	Net	17	
	Taxable capital gains (Allowable capital losses) — complete and attach Schedule 2	18	
Income from Self-Employment	Report both 'Gross' and 'Net'. (Guide item 18). Provide other information concerning self-employment on page 3.		
	Business income Gross	19	
	Professional income Gross	20	
	Commission income Gross	21	
	Farming income Gross	22	
	Fishing income Gross	23	
	Net	24	
Deductions from Total Income	Canada or Quebec Pension Plan Contributions (Guide items 24 and 25)		
	Contributions through employment from Box D on all T4 slips	25	
	Contribution payable on self-employed earnings (from page 3)	26	
	Total Contributions (add lines 25 and 26)	27	
	Subtract: Overpayment of contributions (from page 3)	28	
	Allowable Deduction	29	
	Unemployment Insurance Premiums (Guide item 26)		
	Premiums from Box E on all T4 slips	30	
	Subtract: Unemployment Insurance Overpayment (from page 3)	31	
	Allowable Deduction	32	
	Registered pension plan contributions (Guide item 27)	33	
	Registered retirement savings plan premiums (Guide item 28; attach receipts)	34	
	Registered home ownership savings plan contributions (Guide item 29; attach receipts)	35	
	Annual union, professional or like dues (Guide item 30; attach receipts)	36	
	Tuition fees—claimable by student only (Guide item 31; attach receipts)	37	
Child care expenses (complete and attach Schedule 5)	38		
Other deductions (Guide item 33; please specify)	39		
	Add lines 28 and 31 to 38 inclusive	40	
Net Income (subtract line 39 from line 24 — please enter this amount on line 41 on page 4)		41	

Please do not
use this area

is the last day of February of the following calendar year. Salary paid by a dentist directly to his spouse is not deductible. However, if the dentist owns a corporation which provides him with office facilities and all non-professional services (generally termed a service corporation), a reasonable salary paid to the dentist's spouse by the service corporation would be deductible to the corporation.

(3) Telephone expenses incurred in connection with professional practice.

(4) Office rentals paid.

(5) Postage and stationery.

(6) Proportional expenses of dentists practising from their residence. If the dentist owns or rents a house in which he both resides and practises from, he may deduct a proportion of expenses incurred or rent paid equal to the proportion the area of his office, laboratory and waiting room space is to the total area of the property. These expenses include property taxes, light, heat, insurance, repairs and interest on mortgage.

If the dentist owns the house in which he practises, he may also take capital cost allowance on the areas described above. However, caution should be exercised here, as capital gains may result. This will be discussed in more detail below.

(7) Sundry expenses. These expenses could include such things as the following:

(i) the annual dues paid to governing bodies under which authority to practise is issued, as well as dues to other professional associations,

(ii) insurance premiums paid for such things as malpractice insurance, office contents and liability insurance; however, personal insurance premiums such as life insurance and medical insurance are not allowable,

(iii) magazines, etc. for a waiting room,

(iv) professional textbooks and reference books if purchased individually; however, if an entire library is purchased, the amount so expended would be a capital expenditure which may only be deducted by way of capital cost allowance.

(8) Interest paid on borrowed money

may be charged against professional income if the borrowing was for professional purposes. If the money was borrowed to acquire investments, the interest is also deductible. No deduction from income will be allowed, however, for the interest paid on personal loans. It follows that prudent tax planning would involve using cash on hand for personal items, and, if necessary, borrowing money to finance investments and professional requirements.

(9) Business taxes.

(10) Automobile expenses. If the dentist owns or rents an automobile and makes use of it in his professional practice, the deductible amount is normally that proportion of the total operating expenses of the automobile incurred in the year that the mileage driven for business purposes is of the total mileage for the year. Use of the car in professional practice includes driving the car to visit patients in their homes or in hospital. However, it would not include use of the car between the dentist's home and his office.

Capital cost allowance on an owned automobile used for business purposes, may be included in these automobile expenses and pro-rated in the same way as other automobile expenses.

(11) Entertainment expenses. Those expenses incurred at a social club are deductible if they were incurred for the purpose of earning income and they are properly documented. However, social club dues are not allowable as a deduction. These include any dues or membership fees (including initiation fees) in any club the main purpose of which is to provide dining, recreational or sporting facilities for its members. An outlay or expense made or incurred by the taxpayer (including capital cost allowance) for the use or maintenance of a yacht, a retreat or similar property is not allowed.

(12) Donations. Charitable donations should not be deducted from income from self-employment; however, they are deductible in computing taxable income as outlined below.

(13) Convention expenses. Such expenses are restricted to the expense of

attending no more than two conventions in a taxation year. The dentist's attendance at the convention must be reasonable and have been for professional reasons. Also, the location of the convention must be consistent with the territorial scope of that organization holding the convention. That is, expenses incurred in attending a convention sponsored by a Canadian organization that is held outside those geographical limits will not be deductible in computing income.

The following information should be furnished:

(i) the dates on or between which the convention was held, and the location thereof,

(ii) the number of days present at the convention, supported by a certificate of attendance from the sponsoring organizations, and

(iii) the expenses incurred, segregating (a) transportation expenses, (b) meals, and (c) hotel expenses for which vouchers should be obtained and kept available for inspection.

All expenses of a personal nature including those attributable to the presence of the dentist's spouse and children accompanying him to the convention must be excluded.

(14) Capital cost allowance, or depreciation, can be deducted for equipment owned by the dentist and used in his practice.

The figure resulting from the deduction of the above expenses from gross income is net income from self-employment. (*Item B on tax return.*)

2. Income from other sources

Besides the income from his professional practice, the dentist is likely to have income from other sources.

(a) Interest and other investment income (*Item C on tax return*)

Schedule 4 of the 1976 tax return must be completed in order to determine the amount of interest and other investment income. Generally, dividends and interest are reported to the taxpayer on a T5 Form and therefore require little record keeping. If any money was borrowed to earn the interest or dividend income, the interest paid on the borrowed funds is deduct-



Caulk[™]
Jeltrate[®]
- get it right
the first time.

For more
information
check number 101

No wasted chair time. No costly makeovers. Caulk Jeltrate Alginate Impression Material gives you an accurate impression the *first* time.

Jeltrate has the proper flow to register every oral detail. So appliances fit into place with unerring accuracy, even in the most complicated cases.

Available in three consistencies—Regular, Fast Set, Heavy Body. But the mix *always* works up the same. Smooth. Creamy. Never runny. Never stiff. Batch after batch after batch.

Caulk Jeltrate . . . nice material to work with . . . dependable.

Caulk® making life
a little easier
for dentists
Division of Dentsply International Inc.



ible from total income received as indicated on Schedule 4.

Cash bonuses received by holders of Canada Savings Bonds may be treated either as interest income or capital gains. If they are treated as income, they qualify for the interest and dividend deduction discussed later; if they are treated as capital gains, only one-half the amount is taxable. The taxpayer may choose whichever method is more beneficial to him.

Payments made to an investment counsellor are fully deductible.

An interest and dividend income deduction is allowed which effectively allows an individual to earn the first \$1,000 of interest and taxable dividends from Canadian corporations tax-free. This will be discussed later in the article as this is a deduction in order to arrive at *taxable* income.

(b) Rental income
(*Item D on tax return*)

In the case of rental income, detailed records of all income and expenses must be kept. The records kept will be very similar to the records necessary for self-employment income and expenses.

Schedule 7 of the income tax return must be completed if you have real estate rental income. One of the deductions in arriving at rental income, as indicated on Schedule 7, is capital cost allowance. A provision in the Income Tax Regulations limits the capital cost allowance claim to an amount equal to the net rental income from the building before claiming capital cost allowance. In other words, losses cannot be created by claiming capital cost allowance.

The above restrictions do not apply to multiple unit residential buildings on which construction was commenced after November 18, 1974 and before 1978 and which have been certified for special treatment by the Central Mortgage and Housing Corporation.

New regulations have recently been issued imposing a limit on the capital cost allowance which may be claimed on "leasing properties". Generally speaking, any leasing property which the taxpayer purchased after May 25, 1976 will be subject to similar restrictions as the restrictions on rental build-

ings discussed above. Investments in leasing properties were being used by many taxpayers as tax shelters.

(c) Taxable capital gains
(*Item E on tax return*)

Schedule 2 of the income tax return must be completed if you have sold capital properties during the year (e.g. stocks, bonds, real estate, etc.).

The excess of taxable capital gains over allowable capital losses must be included in income. A taxable capital gain is defined as one-half of the gain from the disposition of a capital property while an allowable capital loss is one-half of the loss from such a disposition. If capital losses from property, other than listed personal property (i.e., works of art, jewellery, rare books, stamps or coins) exceed capital gains, an *individual* may deduct up to \$1,000 of the net allowable capital losses from income from other sources in the same year. There are provisions in the Income Tax Act to apply any additional excess capital losses to the previous year's income, by re-filing that year's tax return, or to any number of future years' incomes until they are absorbed.

If you have sold property in 1976 resulting in net taxable capital gains and you have federal income taxes payable exceeding \$8,000 it is recommended that you try to defer including capital gains in your income in 1976. The reason is that a surtax of 10% on federal income taxes payable exceeding \$8,000 is to be levied in 1976. (This represents a taxable income of approximately \$30,000.) It appears that this surtax is applicable only to the 1976 taxation year, so that as much income as possible should be deferred and taxed in later years.

One suggested method is to purchase an income averaging annuity contract for the amount of the taxable capital gains. The purchase will have to be completed prior to the last day of February 1977 in order to qualify. It should be noted that only certain types of income are eligible, the most common being capital gains, pension benefits, retirement allowances and death benefits.

The advantage of purchasing an

income averaging annuity contract is that the purchase price for the annuity is deductible in the year the qualifying income is to be reported and the future annual payments received from the annuity are reported in income over future years. The contract must provide for annual payments (composed of interest and principal) to the purchaser and the first annual payment must be received within ten months from the date of purchase. The payment must be included in income in the year of receipt and will not qualify for the interest and dividend income deduction. If you decide to buy an income averaging annuity, shop around for the best return as rates of return vary significantly.

Personal residence

Ordinarily a person's residence is exempt from tax on any capital gain realized on disposition if the property was used as his principal residence for the entire period after 1971.

Where each spouse owns solely one of two residences ordinarily inhabited by each (for example a house and cottage), a principal residence exemption will probably be available on the disposition of each.

Where the two properties are owned jointly by the spouses, a principal residence exemption may be available on the disposition of each, provided reciprocal transfers of the joint interests are made prior to the disposition.

If for a period of time after 1971, *both* residences were owned solely by one spouse, the principal residence exemption will not be available in respect of both residences for that period. The years of ownership after 1971 and before the inter-spousal transfer will be "lost" in respect of one residence. In conclusion then, to maximize the principal residence exemption, the sooner one of the residences is transferred to the other spouse (or a joint tenancy arrangement is arranged for both residences) the better.

Use of personal residence for business purposes

Where a dentist is using a portion of his or her personal residence for clinic

and office purposes, special rules apply regarding capital gains and the deductibility of capital cost allowance from the income of the practice. Care has to be taken, especially where the dentist has only just begun using the residence as his clinic, in order to avoid a deemed capital gain. The Income Tax Act specifies that where a change in the use of capital property has occurred (for example, when the house, or a portion of it, has changed from being the principal residence of the taxpayer to being his place of business) a disposition of that property is deemed to have occurred and may be subject to capital gains tax. The disposition is deemed to have occurred at its fair market value at that time, and to the extent that this value is greater than the cost of the property or its fair value on December 31, 1971 (assuming you owned the property on December 31, 1971), the capital gain is taxable. However, in Interpretation Bulletin IT-120, dated April, 1974, Revenue Canada has outlined its policy in the case where only part of the residence is being used for business purposes. As long as the taxpayer does not claim capital cost allowance on any portion of the residence, "it is the Department's view that a change in use of the property has not occurred and that the entire residence maintains its nature as a principal residence, provided it so qualifies." It would appear that this policy does not affect the deductibility of maintenance costs, etc. It should be noted that while the Interpretation Bulletin can in no way be taken as law, it does give a good indication of Revenue Canada's assessing practice.

In any event, a dentist using all or part of his residence for business purposes should check with his accountant to ensure that he is not incurring any additional tax liability.

3. Deductions from total income to arrive at net income

After compiling the income from self-employment and other sources, certain deductions are allowable, some of which are discussed below.

(a) Registered retirement savings plans (*Item F on tax return*)

The proposed amount that is deductible in respect of contributions to a registered retirement savings plan(s) (RRSP) is limited to:

1. In the case of an employee who is or may become entitled to benefits under a pension fund or plan (whether or not he contributes to the pension fund), the lesser of \$3,500 and 20% of earned income minus, in each case, the amount, if any, he is allowed to deduct from income for his contribution to a registered pension fund or
2. In any other case, the lesser of \$5,500 and 20% of earned income. At the time of writing legislation on the proposed limitations discussed above has not yet been passed.

"Earned income" usually consists of income received as salary (before any pension deductions) and income from carrying on a business or profession plus net rental income from real property. The amounts deductible are those paid in the 1976 calendar year and within 60 days thereafter. The final date for payment of contributions which can be deducted in the 1976 tax return is March 1, 1977. At the time of writing, proposed legislation provides that payment made January 1, 1977 to March 1, 1977 may be claimed at the option of the taxpayer, in either 1976 or 1977 or claimed in part in each year.

For 1974 and subsequent taxation years a contribution by a taxpayer can be divided between his plan and his spouse's plan provided that the amount does not exceed the maximum deduction otherwise allowed him. This allows a working spouse to create a registered retirement savings plan for a non-working spouse. The contribution to a spouse's registered retirement savings plan is also advantageous from the point of view of the pension income deduction. As explained later, annuities from registered retirement savings plans are eligible for this income deduction. By contributing to a registered retirement savings plan for a spouse, one can effectively double the amount of eligible pension income of the family unit as a whole, or even of an individual spouse as a result of the

carryover of the spouse's unused pension deduction.

(b) Registered home ownership savings plan (*Item G on tax return*)

A registered home ownership savings plan (RHOSP) may be established to help save money towards the purchase of a house or furnishings. Contributions will be deductible to a maximum of \$1,000 per year up to a lifetime maximum of \$10,000. Deductions are allowed if made during the year or within 60 days after the year end. If during 1976 the taxpayer owned or jointly owned real property in Canada which was used as an individual dwelling place, or held an interest in a partnership which owned such real property in Canada, then he will not be entitled to the deduction. The contributions to a Plan must be for the purpose of providing an amount to be used for the purchase of an owner-occupied home or home furnishings as defined in the Act. If the withdrawals from the plan are not used for this purpose, then the funds may be rolled into a registered retirement savings plan or used to purchase an income averaging annuity. Otherwise income tax will become payable on these withdrawals.

Both spouses, if eligible, may create their own plans. They may then use the funds in both plans to purchase their home jointly, or for the furnishings in that home. Alternatively, one spouse may use the funds for the purchase of their first home while the other continues his or her plan, possibly using it to purchase a summer cottage.

(c) Tuition fees (*Item H on tax return*)

Tuition fees are not deductible by anyone other than the student regardless of who paid the fees.

The other deductions permitted are relatively self-explanatory and will not be discussed here. We have now arrived at net income for income tax purposes. (*Item I on tax return*).

4. Computation of taxable income

Once net income for income tax purposes has been determined, it is necessary to calculate taxable income which is the basis for the actual tax calculation (see page 4 of the tax return). In order to arrive at taxable income certain other

4 Calculation of Taxable Income

- 1. Net income of your spouse or dependants includes Old Age Security Pension and Guaranteed Income Supplement and Spouse's Allowance, Canada or Quebec Pension Plan benefits and Unemployment Insurance benefits—Guide item 34.
- 2. If you were single, divorced, separated or a widow(er) in 1976 and supported a wholly dependent relative in the same dwelling in which you resided, claim the Equivalent to Married Exemption on Schedule 6. If you are claiming dependants other than spouse and children, claim the Exemption for Other Dependants on Schedule 6.
- 3. If you are claiming dependants who did not reside in Canada, complete and attach form T1E-NR obtainable from any District Taxation Office.
- 4. Exemption for Wholly Dependent Children (A) Sons, Daughters or Grandchildren (B) Certain Nieces or Nephews (Guide item 39)
Children under age 16 at end of 1976—Claim \$390 for each child whose net income was not over \$1,410. If a child's net income was over \$1,410 but not over \$2,190, claim \$390 minus one-half the amount by which the child's net income exceeds \$1,410.
Children age 16 or over at end of 1976—Claim \$720 for each child whose net income was not over \$1,470 and who, if over age 21, was in full-time attendance at a school or university or was infirm. If a child's net income was over \$1,470 but not over \$2,190, claim \$720 minus the amount by which the child's net income exceeds \$1,470.

Net Income (from line 40 on page 2) 41 I

Claim for Personal Exemptions Please provide all specified details for each exemption claimed.

Basic Personal Exemption Claim \$2,090.00

Age Exemption—If you were born in 1911 or earlier Claim \$1,310.00

If claiming this exemption, did you receive the Old Age Security Pension in 1976? Yes No

Married Exemption If applicable, please check box 1. or 2.

Married on or before 31st December, 1976, and supported spouse in 1976

1. whose net income in that year, while married, was not over \$360. 1. Claim \$1,830.00

2. whose net income in that year, while married, was over \$360 but not over \$2,190. 2. 2190 00

Subtract: spouse's net income while married

If you became married in 1976, please give date of marriage

Claim

Exemption for Wholly Dependent Children See item 4 above and Guide item 39.

Provide details below and claim according to child's age and net income. Do not claim here for a child you have claimed in the Equivalent to Married Exemption on Schedule 6. Also ensure that the applicable Family Allowance payments for each child claimed are reported on line 12 on page 2.

Name of child (attach list if space insufficient) Relationship to you Net income in 1976 \$ Date of birth of child Day Month Year If over 21 in 1976, state school attended or whether infirm

Additional Personal Exemptions from Schedule 6 attached

Total Personal Exemptions (add above items)

Subtract line 44 from line 41 45

Standard deduction, medical expenses and charitable donations

Claim either A or B, but not both (Guide item 41)

A — Standard deduction of \$100.00 46

or B — The Total of Allowable Amounts below 47

Medical expenses (attach receipts and completed Schedule 3) 48

Subtract: 3% of 'Net Income' (line 41 above)

Allowable portion of medical expenses

Add: Charitable donations (attach receipts and completed Schedule 3) 49

Total Allowable Amounts

Other deductions from Net Income

Interest and dividend income deduction (Guide item 44; attach completed Schedule 4) 50

Pension income deduction (Guide item 46) 51

Disability deduction for persons totally blind at any time in the year, and persons confined throughout any 12 month period ending in the year for a substantial period each day to a bed or wheelchair (Guide item 47). Claim relates to: Self or dependant (specify) 52

Education deduction for eligible students and, within limitations, for persons supporting such eligible students (Guide item 48) Self or dependant (specify) 53

Eligible deductions transferred from spouse (Guide item 49; attach completed Schedule 9) 54

Gifts to Canada or a province (Guide item 50; attach receipts) 55

Non-capital losses of other years (Guide item 51) 56

Capital losses of other years (1972 to 1975) (Guide item 52) 57

Add lines 47, 50 to 57 inclusive 58

Taxable Income (subtract line 58 from line 45—enter this amount on page 1) 59

deductions must be made from net income. These include personal exemptions, deduction for medical expenses, charitable donations and certain other deductions, some of which are discussed below.

(a) Medical expenses and charitable donations (*Item J on tax return*)

Medical expenses, except those expenses which were reimbursed by OHIP, are deductible to the extent they exceed 3% of net income for income tax purposes (as calculated earlier).

The amount of charitable donations which you may deduct is limited to the lesser of the actual expenditure (supported by receipts) and 20% of net income for income tax purposes. A donation must have been made to a registered Canadian charitable organization in order to qualify. Gifts to Her Majesty are not subject to limitation and may be deducted in full.

If the total of the deductible medical expenses and charitable donations is less than \$100, the standard deduction of \$100 should be taken.

(b) Interest and dividend income deduction (*Item K on tax return*)

As mentioned previously, an interest and dividend income deduction is available. To be eligible for the deduction the interest and dividend income must be received from Canadian sources. However, interest and dividends received from a corporation 50% of which was owned by the taxpayer or his immediate family is not eligible, nor is interest income received from a related person. The total amount of eligible interest and dividend income qualifies for the deduction (i.e. carrying charges, etc. do not have to be deducted). The maximum deduction available is the lesser of eligible income and \$1,000.

(c) Pension income deduction (*Item L on tax return*)

For those taxpayers over the age of 65 years who are receiving pension income there is a deduction available (to a maximum of \$1,000) in respect of this income, similar to that available for interest and dividend income. "Pension income" includes (1) a payment out of a superannuation or pension fund, (2) an annuity under a registered

retirement savings plan or deferred profit sharing plan, and (3) the income of any other annuity other than one being received under the Old Age Security Act or similar plan of any province, or under the Canada Pension Plan.

A taxpayer who is under the age of 65 is eligible for the deduction if he receives annuities from either (2) or (3) above and the annuity is received by the taxpayer as a consequence of the death of his or her spouse. A payment out of a superannuation or pension fund qualifies whether or not it is received by the taxpayer as a consequence of the death of his spouse.

(d) Dependent university students (*Item M on tax return*)

Students in full time attendance at university may deduct from their income \$50 for each month that they attended university during the year. A person supporting such a student may deduct from his income the amount the student could not claim.

(e) Eligible deductions transferred from spouse (*Item N on tax return*)

Where a taxpayer's spouse has income eligible for the interest and dividend deduction and the pension deduction but does not have sufficient income after deducting his or her personal exemption fully to use the available income deduction, the unused portion of the deduction may be used by the taxpayer in addition to his or her income deduction. Schedule 9 of the 1976 income tax return details the calculation. An example follows for illustrative purposes.

Spouse's Income

Eligible dividends and interest income (investment income)	\$2,000
Eligible pension income	<u>1,000</u>
Total Income	3,000
Other deductions	(300)
Personal exemption	<u>(2,090)</u>
Spouse's Taxable income	\$ 610
Interest and dividend income deduction	<u>(2,000)</u>
Eligible deductions transferred	\$1,390
Only the spouse earning the eligible	

income is eligible for the deductions discussed above. In order to obtain the maximum deductions, then, both spouses must earn investment and/or pension income.

If only one spouse is earning investment income thought should be given to a bona fide loan from one to the other to enable both to generate investment income. The loan should be payable on demand with or without interest and should be documented by retaining signed promissory notes. The spouse should receive an actual cash transfer which he or she can use to invest as he or she chooses rather than receiving a transfer of securities already owned by the transferor. One spouse cannot gift funds to the other spouse in order to purchase investments, as in this case, the income from the investment would be attributed back to the husband and no advantage would be obtained.

As noted earlier, to obtain the pension income deduction the taxpayer must earn "qualified pension income". For persons over age 65, one method of converting investment income to qualified pension income would be to sell some investments and purchase an annuity with the proceeds (the interest portion of the annuity being considered qualified pension income). Income splitting by way of bona fide loan can be effected here as well to double up the deduction.

The figure which results after the above deductions have been made from net income for tax purposes is taxable income which will be used as the basis for calculating tax. (*Item O on tax return*).

5. Calculation of federal tax

Taxpayers are entitled to reduce their federal taxes payable by eight percent, subject to a minimum reduction of \$200 and a maximum of \$500. This reduction is incorporated in the tables if the taxpayer's income qualifies for use of the tables. In order to use the tables you must meet all of the following conditions:

- (1) Your taxable income must be \$24,000 or less,
- (2) You have no dividend tax credit, foreign tax credit or tax adjustment,



Introducing Super Wernet's® the denture adhesive with biting power preferred 2:1 by denture wearers over the leading karaya-based powder*

Super Wernet's exceptional long-lasting retentive power is derived from two synthetic polymers which help retain dentures longer, stronger against supporting oral tissue.

Independent *in vivo* studies* comparing SUPER WERNET'S to the leading karaya-based powder demonstrated:

Stronger retentive action — SUPER WERNET'S retentive power was favored by a significant margin for use under normal conditions, as well as when eating hard and fibrous foods and drinking hot liquids, without fear of denture slippage.

Longer adhesive action — 64% of patients found SUPER WERNET'S held dentures longer than the leading karaya-based powder. Thus, SUPER WERNET'S means extra hours of denture security, reducing the need for several-times-a-day reapplication.

SUPER WERNET'S helps serve the complete range of denture problems — from anatomical abnormalities to the physical and psychological patient adjustment.

*Results of independent study, data on file at Block Drug, Co.

New
Super Wernet's®
denture adhesive powder



Professional Relations Division
Block Drug Company (Canada) Ltd.
36 Northline Rd., Toronto, Ontario M4B 3E3
"Quality Products for Dental Health"

**Right here
is where
every new
denture should
prove itself.
Look for the Crescent.**

Ask your Assistant to check the linguals of the anteriors. If they're TRUBYTE® Teeth, she'll see a tiny Crescent trademark.

If she doesn't see a Crescent, the denture wasn't made with Trubyte Teeth.

When you're paying for the best, make sure you get the best.

TRUBYTE®

*Creator of fine products
for dentistry.*

D™ Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1976 Dentsply International, Inc.
All rights reserved.

The Crescent is a registered trademark of Dentsply International Inc., York, PA.

Look for the Crescent (☾) on these popular Trubyte Brands

ANTERIORS ▶	Bioblend'	Bioform'	Biotone'	New Hue' V.F.	New Hue'
-------------	-----------	----------	----------	---------------	----------

(3) You did not have self-employed income from a business with a permanent establishment outside the province in which you resided on December 31, 1976 and

(4) On December 31, 1976 you resided in the province to which the tax tables apply.

If you are not eligible to use the tables, Schedule I must be used to calculate taxes payable. All individuals with federal taxes payable exceeding \$8,000 must then compute the 10% federal surtax levied in 1976 on the federal taxes payable exceeding \$8,000.

6. Provincial taxes on individuals

Each of the 10 provinces imposes its own tax on the income earned by individuals resident in that province. With the exception of the province of Quebec, no separate provincial income tax return need be filed by an individual whose income is subject to provincial tax. The amount payable will be included with the federal payment and the method of calculation is indicated on the T1 tax return.

Certain provinces allow tax credits in respect of rent or property taxes paid in the year, old age credits, sales tax credits and contributions to provincial political parties.

A Federal political contribution tax credit is allowed, subject to percentage limitations, and a maximum limitation of \$500. Only receipts issued by officially nominated candidates to parliament will qualify for the credit; applicable to receipts issued after May 25, 1976.

7. Payment of tax

Individuals who derive more than 25 percent of their income from sources other than salary or wages are required to pay the tax for each year by quarterly instalments during the year on March 31, June 30, September 30 and December 31. The required instalments are based on either an estimate of the tax on the current year's estimated income or the tax paid in the previous year. No tax instalments are due where

the total tax payable will be under \$400. Form T7B for individuals is available for the calculation of estimated tax. One quarter of the calculated estimated tax plus Canada Pension Plan instalments are due on each of the above dates, the balance, if any, being payable by April 30th of the following year.

8. Dentists on salary

The Income Tax Act provides for the deduction of certain items from salary income. The allowable expenses include annual professional dues and an employment expense deduction equal to the lesser of \$150 and 3% of the income from employment. In addition, if the dentist is employed under a contract which requires that, in the performance of the duties of the office, he must personally pay certain expenses such as office rent, salary to assistants or substitutes, for the purchase of his own supplies and travel costs, then these expenses are deductible. Canadian Pension Plan and Unemployment Insurance contributions on behalf of assistants are also deductible. No convention expenses may be deducted from salary income.

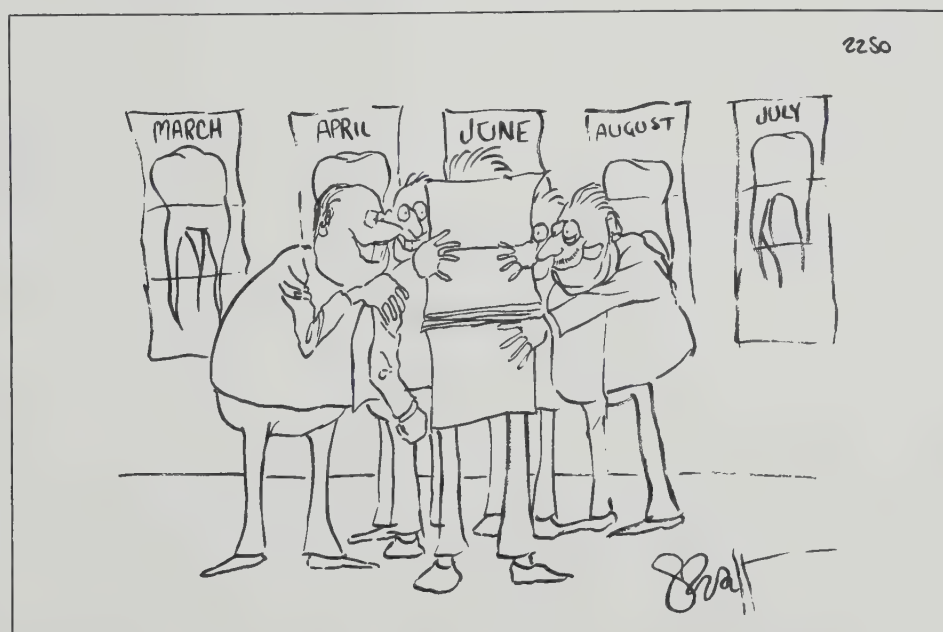
9. Professional partnerships

Partnership income is taxed in the hands of the partners but there are certain features to be considered in

determining income at the partnership level such as capital cost allowance provisions. Basically, the income from a partnership is first determined at the partnership level. The income so determined is then allocated to each partner who includes this allocation in his personal income. Special treatment is required for the reserve for 1971 accounts receivables discussed at the beginning of this article. Certain deductions for expenses incurred personally, such as interest paid on money borrowed to purchase a partnership interest, are allowed. The partnership arrangement should be supported by a legal partnership agreement the drafting of which normally requires professional advice. You may be best advised to obtain professional help in the preparation of your tax return where you are a member of a partnership because of the added complexities involved.

Books and records

The Income Tax Act requires that books and records be kept in order to support all income and deductions claimed. These records should be maintained in such a manner as to facilitate checking by income tax auditors or, indeed, your own accountants. Your records must be maintained until written permission to dispose of them is obtained from Revenue Canada Taxation.



**For the kid
who's full
of excuses...**



new **Aim**® toothpaste

The fluoride toothpaste with the taste children prefer



Child-tested and proven for its superior taste

1300 children tested the taste of new Aim Toothpaste against the taste of the two leading fluoride brands. Result: Children preferred Aim 2 to 1 over those brands. They find its minty flavour truly delicious and they love its clear blue-green color and smooth texture.

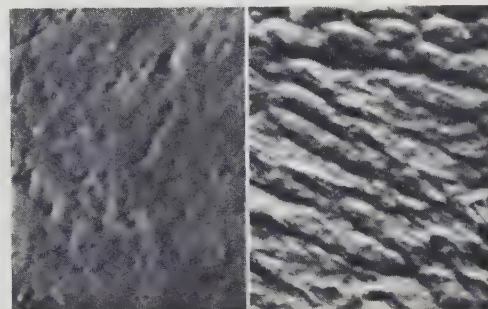
Significance: With taste so superior, your young patients will hardly need coaxing about brushing. And by brushing regularly, they'll get the anti-cavity ingredient they need—regularly.

Proven for its fluoride ion availability

New Aim contains the established concentration of 0.4% stannous fluoride—an anti-cavity ingredient time-proven for its effectiveness as an aid in reducing the incidence of cavities. Aim also has a silica gel base, assuring that the fluoride ion availability is maintained during normal shelf life. In fact, laboratory tests show that the fluoride ion concentration in Aim is readily available for incorporation into tooth structure.

Proven for its gentleness to dentin and enamel

Aim's silica aerogel/xerogel abrasive system* aids in the removal of plaque, pellicle, food particles and stains—with notable gentleness to enamel and dentin. Significance: Aim cleans patients' teeth safely—the way you want them to be.



Surface of normal tooth enamel (2000×) — treated with Aim (exposed section of polished enamel surface, immersed for 15 minutes in a 25% aqueous slurry of Aim followed by a thorough rinsing) — then etched with 0.1N lactic acid, pH 4.5 for 10 minutes. Enamel surface shows minimal etching.

Surface of normal tooth enamel (2000×) — sectioned and polished but left untreated — etched with 0.1N lactic acid, pH 4.5 for 10 minutes. Enamel surface shows extensive etching.

RECOMMEND AIM WITH CONFIDENCE...



*Canadian Patents #835353; #914069

a product of:
LEVER DETERGENTS LIMITED
Toronto, Ontario M4M 1B6

ora-jel-[®]D

The professional denture anesthetic, antiseptic cream saves you chair time.

During the initial new dentures break-in period, patients encounter discomfort that can mean time-consuming office visits to you. Ora-Jel D can be an invaluable aid in your practice. Ora-Jel D starts relieving pain on application. It soothes irritated tissue — without masking the problem. Provides long-lasting pain relief during the critical denture adjustment period and builds patient confidence.

For all dentures, Ora-Jel D makes adjustment easier and faster because it eases pain. Ora-Jel D works just as effectively to relieve soreness and irritation caused by orthodontic appliances.

Ora-Jel D is an easy to use cream that your denture patients can apply at home—to relieve the pain of denture irritation. It also offers anesthetic and antibacterial action. And the relief lasts for hours.

Mail coupon for free professional sample. Ora-Jel D saves time at the chair and keeps problem patients happy.

COMMERCE DRUG (CANADA) LTD.
9190 Charles de Latour St.,
Montreal 355, Canada

Dept. # J.C.D.A.

Name _____

Address _____

Zip _____

THE ESTIMATION OF AGE OF SKELETAL REMAINS FROM THE COLOUR OF ROOTS OF TEETH

A. R. Ten Cate, BSc, BDS, PhD
G. W. Thompson, DDS, MScD, PhD, FRCD(C)
J. B. Dickinson, DDS
H. A. Hunter, DDS, MScD, FRCD(C)
Toronto

The roots of teeth show a progressive yellowing with age, and this paper reports the use of this fact to determine tooth age. Teeth of known age were collected and sorted into five-year age groups. These provided the samples against which teeth of unknown age were matched. It was found that the most accurate results were obtained by usual assessment trained personnel. The ability to age single teeth on the basis of root colour has obvious implications for forensic use in dentistry.

Determination of the age of skeletal remains is an important aspect of forensic medicine, particularly so in these days when mass air disasters, often involving over 300 individuals, occur. As teeth are perhaps the most durable part of the skeleton, the ability to determine age from teeth alone is especially important. An extensive literature on this subject testifies to this importance.^{1,2}

Thirty years ago, Gustafson³ detailed a method for assessing age of skeletal remains from teeth. His method involved the use of six features more or less associated with age. These were: (1) the amount of tooth attrition, (2) the amount of gingival recession (only possible if the tooth is *in situ*), (3) the amount of secondary dentine formation, (4) the amount of cement deposition, (5) the transparency of root dentine and (6) the amount of pathological root resorption. Each feature was given a score between 0–3 and, with the total number of points scored, age was assessed by reference to a regression line produced from scores obtained from teeth of known age. This approach was modified by Johanson⁴ who, using the technique of multiple regression which recognizes that each of the six factors has its own variability, increased the reliability of Gustafson's method to a standard deviation of ± 5.16 years.

There are, however, several drawbacks to Gustafson's method as modified by Johanson. They are:

- (1) none of the six criteria can be used alone,
- (2) six criteria are useful only if used in combination with the others,

- (3) when only a single tooth from any individual is available the standard deviation increases greatly,
- (4) an expert training in dental histology is required,
- (5) estimation of root transparency must be made on sections 1 μ m thick,
- (6) over 50 years of age the standard deviation increases significantly,
- (7) anterior teeth should be used wherever possible and,
- (8) the police often require rapid results. Sectioning of teeth involves a significant time factor.

Gustafson realized the limitations of his method but, as he himself wrote, "until now no other method has been found superior and therefore every possible improvement is to be welcomed."

A factor Gustafson did not use in his six criteria was a measurement of the degree of discoloration and staining of teeth. Biedow⁵ suggested that the staining of enamel and exposed dentine from food should replace root resorption in Gustafson's six criteria. However, this is an extremely variable factor. De Jonge⁶ and subsequently Brudevold⁷ both reported that teeth in higher age groups become more yellow with age, but they did not pursue this further. In this paper we report a method for determining the age of skeletal remains from the dentition, utilizing a colour change in root dentine.

Materials and methods

This investigation was started by one of us (A.R.T.C.) with the full permission of a colleague, Professor J. Osborn of London University, England. Professor Osborn had a small sample of teeth of known ages assembled in five-year groups as standards. Given an "unknown" tooth, he seemed to be remarkably skilful at ageing most of them by simply matching root colour to the colour of his standards.

About five years ago it was decided to see if Professor Osborn's ability at ageing teeth in this way could be validated on a more scientific basis. Dental practitioners in

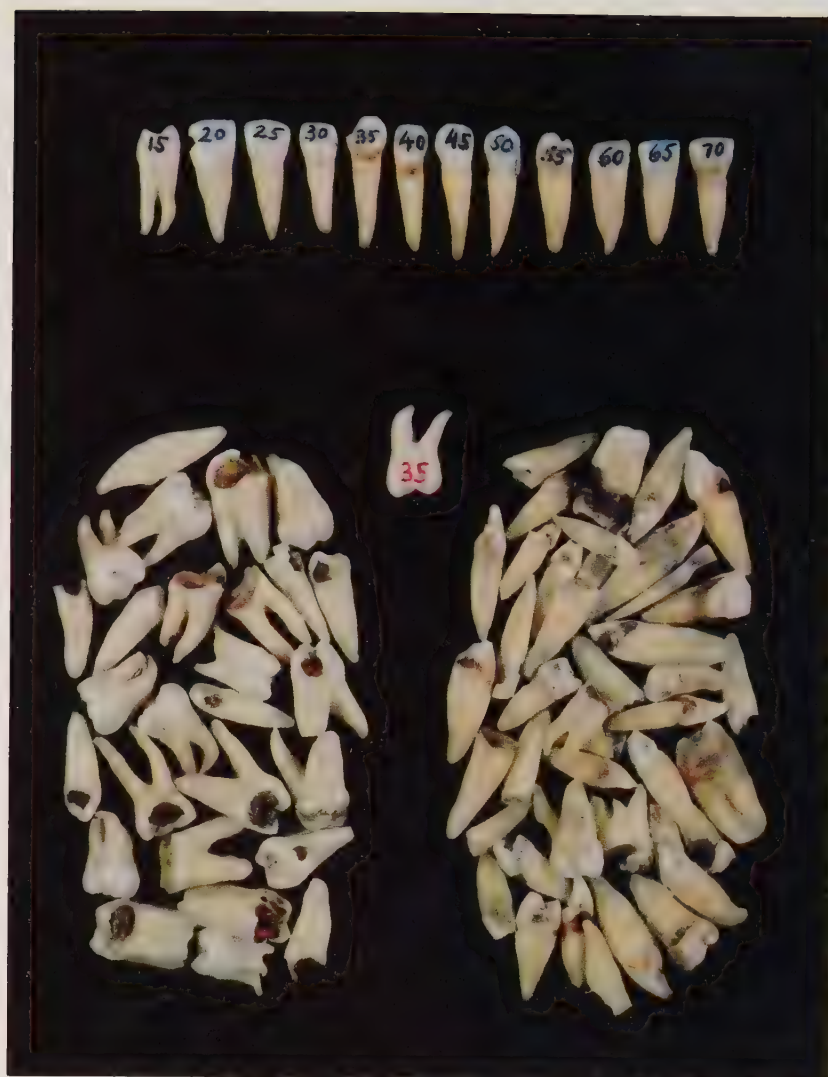


Fig 1 A selection of teeth arranged in ascending order of age with the youngest teeth to the left. The progressive yellowing of the root surfaces is clearly indicated.

Fig 2 Two sample piles of teeth which acted as standards. To the left is the standard for teeth of age 16–19; on the right 60–64. The tooth (coded 35) between the two piles is an “unknown,” and it can be seen that it is easy to place this tooth closer to the 16–19 age group than to the 60–64 group.

Ontario were canvassed for extracted teeth of known age. The response was extremely gratifying and an excess of 1,000 teeth of known age were received. On receipt, the roots of the teeth were cleaned of adherent periodontal ligaments and dried blood by brisk scrubbing in water. They were then dried and stored in glass jars in the following five-year age groups: 15-20; 21-25; 26-30, and so on, until 81-85. Initially two sets, male and female, were assembled. Visual inspection of these samples readily revealed that the roots of teeth showed a progressive change in colour (yellowing) with age and that this change was common to teeth of both sexes (Fig 1). The samples were therefore pooled. The question remained, however, whether this colour change could be measured and used as a reliable indicator of skeletal age.

(1) *Visual assessment of untrained individuals*

Twenty-five teeth of known age, ranging from the teens to the eighties, were coded with the code known to only one of us (A.R.T.C.). Groups of individuals were then asked to match, on the basis of root colour, the unknown coded teeth to the standards, represented by all the sample “five-year” groups of teeth arranged in piles in ascending order of age (Fig 2). These individuals consisted of, at different times,

first-year undergraduate students, dental hygiene students, technical and support staff and postgraduate students at the Faculty of Dentistry, University of Toronto. It was noticed that testees experienced varying degrees of difficulty in matching the unknowns to the standards. Thus some completed the assignment in 15 minutes; others took as long as 45 minutes. This represented either a lack of interest in the project or a genuine inability to match colour. Even the inducement of a “case of beer” for the undergraduate in a class of 125 producing the best match did not improve results to any significant degree! For illustration we have selected the results obtained from 17 postgraduate students who undertook the test on two separate occasions. At first appraisal the results were disappointing as only 46 per cent of the test teeth were correctly aged to within ± 5 years. However, when these results were broken down further and the performance of each testee assessed, some cause for optimism was noted. Thus, one student, in two separate tests placed 66 per cent of the unknowns to within ± 5 years (compared to Gustafson ± 5.16 years). The poorest student, on the other hand, only achieved a 36 per cent placement within the same range. When the performance of the students in ageing individual teeth of the 25 unknowns was analyzed it was found that all students easily placed

some teeth to within ± 5 years and consistently had difficulty with others. Examination of the latter teeth revealed why such difficulty was experienced. One had a marked hypercementosis; another had cement chipped off in places so there was no way of knowing if the testee had assessed cement or dentine colour. It was also noted that testees had assessed cement or dentine colour and had more difficulty in matching older teeth. Although it was not possible in the interest of scientific accuracy to discard such wayward samples, a distinct impression was gained that individuals with a "good eye" and with test teeth devoid of obvious pathology, would be able to achieve a far better performance than the 46 per cent level achieved by the whole group.

(2) Colour densitometry

At this time the problem was given to J.D., then an undergraduate student, as a research project during his tenure of a Medical Research Council of Canada summer studentship. Teeth of known age were photographed at a 1.1 magnification using a standard background (Kodak Standard Grey Card #10) on Kodachrome II colour film. Four teeth were photographed in every frame so that a 36 exposure film contained images of 144 teeth.

The colour of the roots of the photographed teeth were then measured with a Macbeth T.D. 504 transmission densitometer. This instrument works as follows: a beam of light $\frac{1}{8}$ " in diameter is passed through the colour transparency and the total transmitted light is measured and displayed digitally. To measure "yellow" a Wratten blue 47 filter is interposed in the beam and a second reading taken. From this reading is subtracted the reading for the total transmitted beam and the result is the figure which we have used to indicate yellowness.

Six such readings were taken from each tooth: two from the apical one-third of the root, two from the middle one-third and two from the cervical one-third. These paired readings were averaged and then plotted against *tooth age*, not patient age. As the beam only measures a spot $\frac{1}{8}$ " in diameter, some selection of root surface area had to be made. Areas showing obvious staining or calculus deposits, translucent areas and areas reflecting light from the flash were, for example, rejected. The reason tooth age was selected rather than patient age, was because we suspected that the colour change might be related to cement deposition. Thus in a 30 year old patient the cement on the middle third of the canine root is formed around 13 years and the tooth age is therefore 17. Equally, in a young individual (17) the cement on the middle one-third of the root of a third molar is not formed and this explains the negative readings illustrated in Fig 3.

When the densitometric values for 36 teeth of known age were plotted it was readily apparent that the readings from the middle third of the root showed the least scatter (Fig 3). Two regression lines that related age in terms of density, were derived from the 36 points. The best-fit line, illustrated

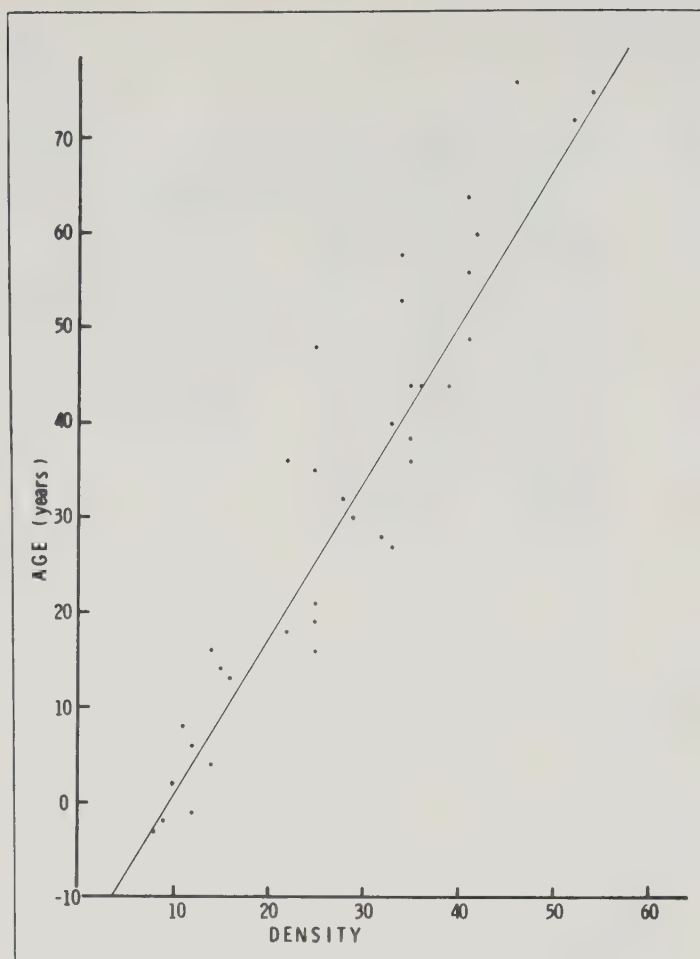


Fig 3 Regression line relating age in terms of optical density.

in Fig 3, was derived by selectively deleting points that were considered to be statistical outliers and beyond a reasonable level of error. This gave us the best correlation between colour density and age. The correlation between these two variables was 0.9 which is statistically significant at $p < 0.01$.

(3) Visual assessment by trained individuals

Despite the promising results obtained using the densitometer, the fact remains that the human eye is better able to assess colour than any optical instrument yet devised. Because of this and the information obtained from the densitometry study, we went back to a visual assessment of root colour, but this time using a trained eye. Two of us (A.R.T.C. and J.D.) attempted to assess the age of 26 unknown teeth by matching them visually to the "standard" five-year groups of teeth. The test was repeated on two separate occasions and the results showed a remarkable improvement over those obtained from visual assessment by untrained or disinterested personnel and from the optical densitometry method. For instance, T.C. placed 33 per cent of the sample to within ± 2.15 ; 90 per cent to within ± 5 and all to within the ± 10 range. J.D. placed 47 per cent to within ± 2.5 ; 78 per cent to within ± 5 and 98 per cent to within ± 10 (Fig 4). Both assessors had most difficulty with teeth from individuals aged 60 and over.

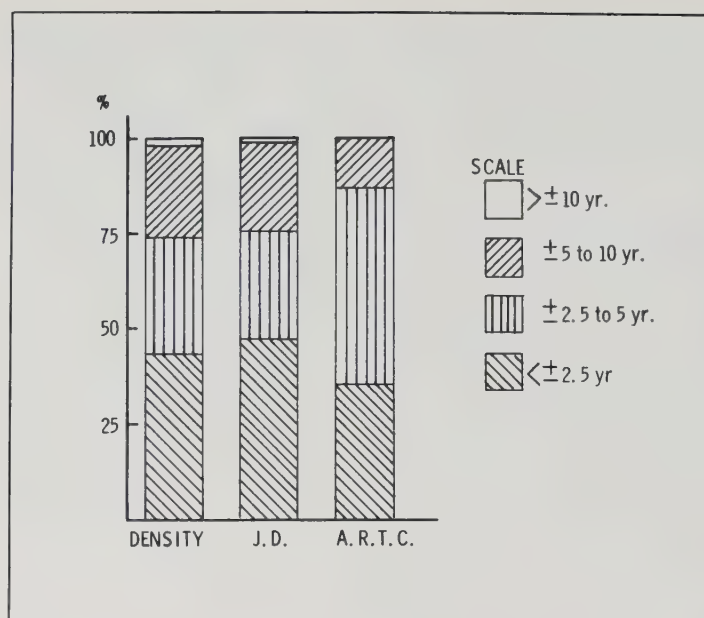


Fig 4 Accuracy of age estimation of teeth by the densitometric method and by visual assessment using trained personnel.

Discussion

On the basis of all our results, there can be no doubt that there is a relationship between root colour and age which is indicated by a progressive yellowing of the roots. Whether this is due to continued cementum deposition throughout life or to some change in the dentine we have not attempted to determine. From the viewpoint of forensic dentistry, the important question is whether or not this colour change can be used to determine the age of the individual from whom the tooth came.

Visual matching to standards by untrained personnel was not very consistent. It was clear from watching testees perform that some individuals had more difficulty than others. Nor were our standards ideal. They were just an assembly of teeth of known age; crowns were present, many with amalgam fillings or carious cavities, so that the white of enamel, the silver of amalgam and the browns of carious enamel intermingled with the yellow dentine. It was, therefore, not surprising that some of our testees had difficulty in assessing the all-over colour of the roots.

It was partly because of this, and a desire to place colour assessment on a more scientific footing, that the method involving measurement of the optical density of colour transparencies was explored. While the results of this technique were certainly better than visual matching by untrained personnel there were drawbacks. Perhaps the most serious was that it demanded reproducible photographic processing. As we used a standard background, it might be possible for others to use the regression line we have produced, provided the same background is used as a control. Although not explored, the possibility does exist of producing a correction factor to account for variations in lighting and photographic processing. Another drawback with the measurement of optical density was that only a small area of root surface could be measured at any time.

Unlike the eye, the densitometer cannot "average out" root colour without taking many hundreds of time-consuming readings.

Ultimately, however, our results indicated that the best way of making an assessment of age from tooth colour was to use the eye of a trained person. Such a person can be defined as one who has the knowledge to eliminate obvious pathology and has a "colour sense." We also realize that there is room for improvement. We have already referred to the fact that our "standards" were far from satisfactory. If, in some manner, the average colour of the roots of our five-year groupings could be measured accurately and reproduced in the form of colour cards, we suspect that matching would be much easier. This avenue of approach has been explored and it is theoretically possible to produce such colour cards but the estimated cost of over \$5,000 is a limiting factor!

Thus, we suggest that root colour can be used as an indicator of age. It has advantages over Gustafson's method in that (1) the teeth need not be *in situ*, (2) no sectioning is required, (3) single teeth can be used, (4) any tooth can be used, and (5) it is easy and fast to do — once the standards have been assembled. Because of the weakness in our standards it is still, perhaps, wiser to use this factor in conjunction with Gustafson's other criteria. If colour samples can be produced as standards, our results suggest that the assessment of age from root colour would become a fast and relatively easy method of assessing skeletal age and therefore a valuable adjunct to forensic science.

The authors wish to thank the many testees who gave of their time to help with this investigation. In particular, Professor J. Osborn, who gave permission to pursue his "party trick" further. Finally, we would like to thank the practitioners of Ontario who gave their time to save and properly label teeth extracted in their offices.

Dr. Ten Cate is professor of dentistry and chairman of the Division of Biological Sciences; and research co-ordinator, Faculty of Dentistry, University of Toronto.

Dr. Thompson is associate professor of dentistry and associate dean, Faculty of Dentistry, University of Toronto.

Dr. Dickinson was a summer student with the Medical Research Council of Canada, and is presently in private dental practice.

Dr. Hunter is Professor Emeritus of the Faculty of Dentistry, University of Toronto.

- 1 Gustafson, G. Forensic odontology. London, Staples Pres, 1966.
- 2 Harvey, W. Forensic odontology. London, Kimpton, 1976.
- 3 Gustafson, G. Age determinations on teeth. J. Amer. Dent. Assoc. 41:45, 1950.
- 4 Johanson, G. Age determinations from human teeth. Odont. Revy. Vol. 22, Suppl. 21, 1971.
- 5 Biedow, J. A modified method of age determination of teeth. Third International Meeting in Forensic Immunology, Medicine, Pathology and Toxicology, London, 1963.
- 6 de Jonge, E. Das Altern Des Gebisses. Parodontologie. 4:83, 1950.
- 7 Brudevold, F. Aldersforandringer i tannenealjen Norske Tannlaegeforen. Tid., 67:451, 1957.

These new Mosby references can help

- expand your diagnostic skills
 - refresh your basic science understanding
 - update your clinical techniques
-

New 2nd Edition! ATLAS OF THE FACE IN GENETIC DISORDERS. By Richard M. Goodman, M.D. and Robert J. Gorlin, D.D.S., M.S. This revised and expanded atlas now lists and illustrates over 200 genetic syndromes that can help you in differential diagnosis. Grouped according to modes of transmission, discussions can help you better understand and treat patients with genetic disorders. A valuable section outlines what to look for and how to compare observations in terms of normal and abnormal. February, 1977. Approx. 576 pp., 1,181 illus., 3 in color. **About \$59.10.**

New 3rd Edition! OPERATIVE DENTISTRY. By H. William Gilmore, D.D.S., M.S.D.; Melvin R. Lund, D.M.D., M.S.; Colonel David J. Bales, D.D.S., M.S.D.; and James Verneti, D.D.S., F.A.C.D., F.A.G.D., F.A.D.I. Expanded and up-to-date, this new volume emphasizes the accurate and refined procedures of operative dentistry. Considerations reinforce the understanding and efficiency of the dentist and office team, and examine the preservation of the natural dentition with preventive, diagnostic, and restorative treatments. May, 1977. Approx. 512 pp., 732 illus. **About \$27.85.**

New 5th Edition! McCRACKEN'S REMOVABLE PARTIAL PROSTHODONTICS. By Davis Henderson, B.S., D.D.S., F.A.C.D. and Victor L. Steffel, D.D.S., F.A.C.D., F.A.D.P., F.I.C.D. This latest edition of a classic reference explains the essentials of partial dental service and brings you up-to-date on design materials and treatment planning. Well illustrated discussions analyze classification, component parts, rests and rest seats, direct and indirect retainers and denture bases and stress breakers. You'll also find helpful information on major connectors and biomechanical considerations. April, 1977. Approx. 496 pp., 628 illus. **About \$20.50.**

New 3rd Edition! ORAL MICROBIOLOGY. Edited by William A. Nolte, B.S., M.S., Ph.D. with 7 contributors. Particularly relevant to dentistry, this revised edition reviews the basic science aspects of microbiology. New material discusses cytology, physiology, the growth of microorganisms, microbial genetics, normal microflora of the body, host-parasite relationships, and immune mechanisms — providing you with a complete text in oral microbiology. All the strengths of previous editions have been retained, including emphasis on the role of microbiology in dentistry. June, 1977. Approx. 704 pp., approx. 392 illus. **About \$25.75.**

New 2nd Edition! BIOCHEMISTRY: A Case-Oriented Approach. By Rex Montgomery, D.Sc.; Robert Dryer, Ph.D.; Thomas E. Conway, Ph.D.; and Arthur A. Spector, M.D. As a basic "core" book, the new edition of this reference covers the essentials of biochemistry: carbohydrates, lipids and proteins. Case histories conclude each chapter, correlating the material with clinical situations. Fresh material examines electrolytes, the Krebs cycle, steroid metabolism, hormonal regulation, and more. April, 1977. Approx. 720 pp., 266 illus. **About \$12.10.**

MOSBY
TIMES MIRROR

THE C. V. MOSBY COMPANY, LTD.
86 NORTHLINE ROAD
TORONTO, ONTARIO
M4B 3E5

CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE.

Direct advertising copy to:
Classified Advertising Dept., Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6.

CLASSIFIED ADVERTISING RATES

(Per Insertion Per Issue):

Minimum (50 words or less)	\$15.00
Each additional word	.30
Service charge for C.D.A. Box No.	2.00

DISPLAY CLASSIFIED ADVERTISING RATES:

Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

OFFICES AND PRACTICES

BRITISH COLUMBIA — Burns Lake. Dentist wanted to practise in the Village of Burns Lake in northern British Columbia. Office space is available in a new Medical-Dental Building, constructed June 1976. There would be room for one or two dentists in the building. It is located directly across from the Hospital. The doctors, presently in the building, would be willing to provide anesthetic services for the dentists, either in the clinic or the hospital. This is an ideal opportunity for a young dentist in an expanding town, in one of the most beautiful recreational areas in British Columbia. Contact: Cotohe Management and Professional Services, P.O. Box 167, Burns Lake, B.C. V0J 1E0.

BRITISH COLUMBIA — Parksville, Vancouver Island. Office Space: New prestige building adjacent to City Hall, Court House and Post Office, located in town centre. Two floor, centre mall, sky-lites and air-conditioning, with view of the ocean. Parking available. Please call: 536-9334 or 738-4171.

BRITISH COLUMBIA — Southern Interior. Practice grossing \$330,000 now, but with additional help could gross well over \$400,000. Owner will work for purchaser for a while if desired. Practice consists of two associates, hygienist, and a C.A. Reply to CDA Box Number 1664.

BRITISH COLUMBIA — Vancouver. Well established, high gross ultra-modern, three operator preventive-oriented practice for sale. For details and more information write to CDA Box Number 1658.

ALBERTA — Calgary. For Sale. Calgary practice with high gross. Three fully equipped operatories with modern equipment. Space for fourth operator. Reply to CDA Box Number 1662.

ALBERTA — Calgary. High gross general family practice on main artery. Five operatories with all the appropriate support rooms. Would also like to sell small building the office is housed in. Very reasonably priced either way. Phone: (403) 278-1415 or write: Branitt Holdings Ltd., 239 Parkside Cres. S.E., Calgary, Alta. T2J 4J3.

MANITOBA — Winnipeg. For Sale. Well established general dentistry practice in suburban Winnipeg. Located in small shopping centre, 900 sq. ft. office space, modern decor. Webber and Dental-Eze equipment in all three fully equipped operatories. For further information reply to CDA Box Number 1654.

ONTARIO — Brampton. Dental office for rent. New Medical-Dental building conveniently located opposite the hospital. Will assist with partitioning. Phone: 451-5802 or 451-2024.

ONTARIO — Cannington. Golden opportunity awaits any dentist setting up practice in Cannington, 70 miles north east of Toronto. Rapidly developing small town of 1,500. Local hospital privileges. New medical center with spacious fully serviced dental suite. Present part-time dentist leaving to concentrate on his city practice but might sell some equipment. Reply to Box 370, Cannington, Ontario L0E 1E0. Phone: (705) 432-2569.

ONTARIO — Ottawa Area. General practice in growing town, population 4,000. Three operatories — 2 fully equipped, technician on premises, rent \$270 monthly. Reply to CDA Box Number 1657.

ONTARIO — Schomberg. Dental Practice for sale. Only practice in growing community 25 miles north of Toronto. Modern equipment. Real sacrifice. Owner has other interests. Reply to CDA Box Number 1663.

ONTARIO — Tillsonburg. Active family practice for sale. Two fully equipped operatories in self contained building. Lease — \$250 per month. Low cash outlay. Available next spring. Contact: Dr. G. D. Higgins, 9 Hyman St., Tillsonburg, Ont. N4G 2C3.

ONTARIO — Toronto. Office for lease in Ajax, consisting of reception room, business office, x-ray room, laboratory, three operatories with plumbing, leadlined walls, 600 sq. ft. Alternatively, the office could be fully equipped and the dentist could associate with a minimum salary plus bonuses, plus option to buy. Reply to: Dr. Hing, 440 Brown's Line, Ajax, Ont. Phone: 259-6597 or 244-8234.

ONTARIO — Weston. Dental office for rent. Consists of 2 operating rooms, laboratory and darkroom, reception area, waiting room and private office. All plumbing and electric wiring are present. Fluorescent lighting has been installed. Area approximately 500 sq. ft. Rent \$250 monthly. Contact: Dr. W. K. Cameron, 2315 Weston Rd., Weston, Ont.

ONTARIO — Windsor. Established office. Four operatories, small lab, dark room, waiting room. Center of a growing new area. Sale, Lease or Associate arrangement. Home (4 bedroom, modern) also available. Contact: P. J. Courcy, 1490 Cabana Rd., Windsor, Ont. Phone (1) 519-258-5912.

QUEBEC — Banlieu de Montréal. Bureau comprenant 2 salles opératoires tous équipées à vendre (prix dérisoire). La clientèle remonte à plus de 75 ans de pratique. Réussite assurée au départ. (514) 773-9343 ou 772-5142.

QUEBEC — Montreal. Four year established general practice in the west end area. Four operatories, two fully equipped. Excellent opportunity for one or two prevention-oriented dentists. A thousand square feet, commercial laboratory next door. Yearly gross income near one hundred thousand dollars. Owner specializing. Reply to CDA Box Number 1660.

QUEBEC — Montréal. (Ville Saint-Laurent). A louer. Centre dentaire. 2 locaux — 4 cliniques avec ou sans équipement — orthopantomographe. Téléphonez à 336-6464.

QUEBEC — MONTREAL (Snowdon Area). Sublet. Bright corner office, six windows, air-conditioned. Two operatories, fully equipped, one with Dental-Eze chair, lab, private office, reception area, waiting room with eight chairs. Recently painted. Available June 1977, or earlier, if desired. Please reply to CDA Box Number 1655.

NEW YORK — Albany Area. General practice for sale. Brick home-office in growing suburb on corner lot. Three bedroom home with private backyard. Fully equipped 2 operator, three-year-old office. 1975 gross \$50,000. Cost \$85,000 firm. Owner joining V.A. for specialty training. Phone evenings: (518) 477-8919.

ISRAEL — Jerusalem. Two fully equipped operatories. Prestige practice, excellent earnings. Beautiful view of the Knesset and Museum. Condominium office for sale as well. Modern building. Available June 1977. Contact: Dr. M. Florence, 4 Tchernichousky St., Jerusalem, Israel.

OPPORTUNITIES AVAILABLE

BRITISH COLUMBIA — Vancouver. Pedodontist wanted. Opportunity available for pedodontist to join established practice in Vancouver. Associateship leading to partnership. Preventive oriented practice. Contact Dr. Richard B. Kramer, Suite 708, 2525 Willow St., Vancouver, B.C. Phone: (604) 873-3501.

ALBERTA — Medicine Hat. Dental Hygienist urgently required for full-time position in preventive orientated practice. Excellent salary and benefits. Contact: Dr. Clifford S. Hrankowski. Phone: (403) 526-8694.

ALBERTA — Wetaskiwin. Dental Hygienist required immediately for the Wetoka Health Unit, located 35 miles south of Edmonton. Primary stress of education and nutrition. Salary scale: \$918-\$1307 per month plus fringe benefits, depending on experience. Contact: Dr. J. MacQuarrie, MHO, Wetoka Health Unit, 5007 - 51 Ave., Wetaskiwin, Alta. Phone: (403) 352-3337.

ONTARIO — Mount Brydges. Dentist required for a community Health Centre west of London, providing comprehensive health care including dentistry, pharmacy and x-ray. There is affiliation with the University of Western Ontario. Please write: Southwest Middlesex Health Centre, P.O. Box 219, Mt. Brydges, Ont. N0L 1W0. Attention: Mr. J. H. Eakins, President.

ONTARIO — Ottawa. Dental Hygienist urgently required for full time position. Well established preventive group practice in downtown Ottawa. Write: Dr. D. H. Reid, 130 Albert St., Suite 500, Ottawa, Ont. K1P 5G4.

NEWFOUNDLAND — St. John's. Dental Hygienist wanted for busy practice in central St. John's. For further information write: Dr. R. F. Quigley, 203 LeMarchant Rd., St. John's, Nfld., or phone: (709) 576-4415.

AUSTRALIA — University of Queensland. Lecturer in Periodontics, Department of Dentistry. Applications should hold a higher degree or diploma in dentistry, experience of teaching in periodontics and a record of published work. Quote Ref. No. 41476, 31.3.76. Salary \$A13,552-\$A17,993 per annum. Clinical Loading of \$A2,500 is also paid as a salary supplement. Other Benefits: Superannuation, housing assistance, study leave, travelling and removal expenses. Additional information and application forms are obtainable from: The Staff Officer, University of Queensland, St. Lucia, 4067, Australia.

ASSOCIATESHIP AVAILABLE

BRITISH COLUMBIA — Fernie. Full-time associate required with option to buy in a couple of years. Contact: Dr. R. H. Campbell, Box 130, Fernie, B.C.

BRITISH COLUMBIA — Revelstoke. We are offering the opportunity for a young dentist to work with us in a non-traditional, cooperatively managed dental environment. The program is designed to help the associate learn communication skills and principles of effective practice management as well as advanced preventive and restorative techniques. Our group is located in an Alpine area and there is a great need for health improvement. Please call collect: (604) 837-5149 or write to: Evolution Management, Box 2118, Revelstoke, B.C.

BRITISH COLUMBIA — Southern Interior. Looking for one or two dentists to associate. Family practice with lots of patients. Reply to CDA Box Number 1665.

BRITISH COLUMBIA (Northwest) — Terrace. Associate wanted with option to purchase, or someone to satellite practice from lower mainland. All expenses (air fare, etc.) paid. All equipment, staff, etc. provided on guaranteed income or percentage of fee basis. Three chairs, preventive four handed practice. Write: Dr. Talarico, 4546 - 10 Park Ave., Terrace, B.C. V8G 1V4.

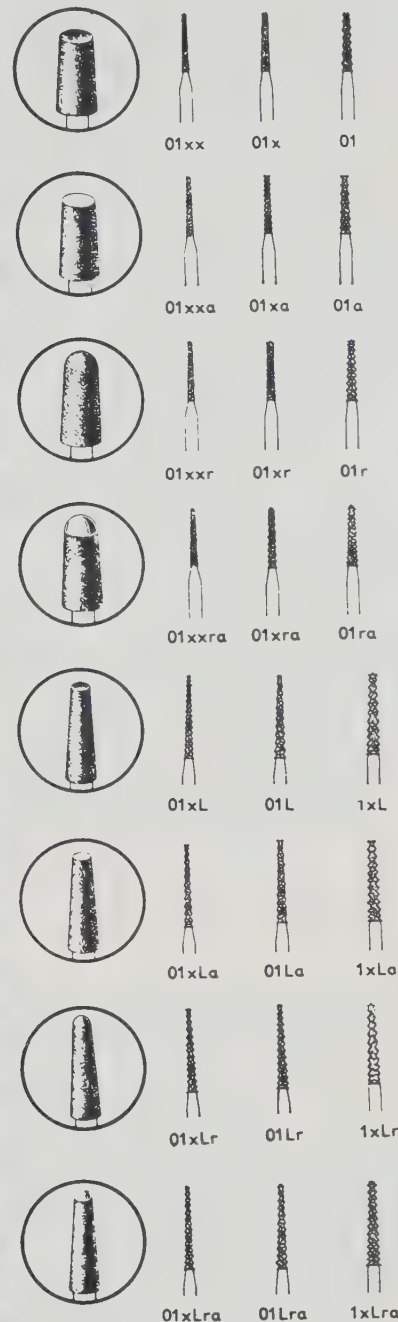
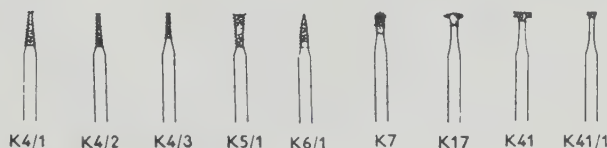
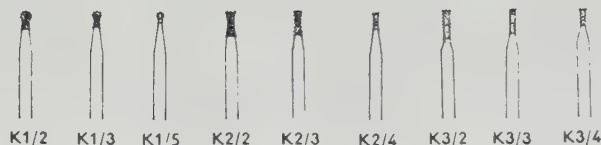
ALBERTA — Calgary. Associate wanted for a busy modern practice in a high income community, 45 minutes from Calgary. Leasing will also be considered. Associate or lessee will have the option to purchase. Two (2) operatories with a third ready to be equipped. Immediate high income assured. Hospital privileges available. Reply to CDA Box Number 1661.

ALBERTA — Edmonton. Group of 4 dentists in a preventive oriented practice requires an associate. Downtown location and nice environment. Please reply to: Dr. Ken A. Hart, 401 - 10080 Jasper Ave., Edmonton, Alta. T5J 1V9. Phone: (403) 423-2405.

ALBERTA — Medicine Hat. Full-time Associate urgently required with view to partnership if desired, in very busy five operator high gross, modern dental practice. All latest equipment and diagnostic aids. Practice consists of all phases of dentistry, preventive oriented. City population 35,000, trading population 95,000. Contact: Dr. Clifford S. Hrankowski, Phone: (403) 526-8694.

ONTARIO — Toronto. Associate required for busy full-time general practice in mid Toronto. Excellent income and working conditions with long term possibilities. Available mid 1977. Apply to CDA Box Number 1659.

QUEBEC — Montreal. Immediate opening available for full or part time associate. Ideal situation for intern willing to work Saturdays or evenings. Fully equipped operator, receptionist, assistant, hygienist. Conditions negotiable. Applicant might consider renting the operator while building up his own practice. Write: Corla, 258 Sheraton Drive, Montreal West. Phone: (514) 489-3774.



**DIAMOND
INSTRUMENTS**

THESE, AND MANY MORE

Write for Catalog No. 143

PFINGST & COMPANY, INC.
62 COOPER SQ NEW YORK, N.Y. 10003



THE UNIVERSITY OF BRITISH COLUMBIA

THE UNIVERSITY OF BRITISH COLUMBIA
Board of Governors

invites applications and nominations for the position of

DEAN OF THE FACULTY OF DENTISTRY

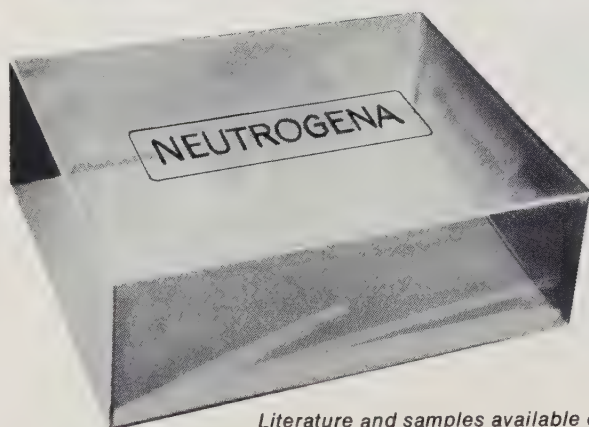
The Dean exercises academic leadership in the school which currently consists of 32 full-time faculty and 55 part-time faculty. It offers a four-year programme leading to the D.M.D. degree, graduating 40 students each year. It also offers a diploma course in dental hygiene. The school is housed in a well-designed and equipped modern building on the University campus.

Written nominations or applications for the position accompanied by a curriculum vitae should be forwarded before March 1, 1977 to:

Dr. D. H. Copp
Co-ordinator, Health Sciences
Instructional Resources Centre
The University of British Columbia
2075 Wesbrook Mall
Vancouver, B.C. V6T 1W5

**If you wash your hands
50 times a day
(as most dentists do)**

You need Neutrogena



Literature and samples available on request



PROFESSIONAL PHARMACEUTICAL CORP.
2795 BATES ROAD, MONTREAL 251, QUEBEC • (514) 739-3633

ASSOCIATESHIP WANTED

BRITISH COLUMBIA — Vancouver. Preventive oriented associateship desired by 1972 Canadian graduate. Experience in total patient care, chiefly involving crown and bridge, endodontics and pedodontics. A well established busy group practice with high quality care is preferred. Available starting January 1978. Reply to CDA Box Number 1656.

ORAL SURGEON, Graduating in 1977 and Board eligible, desires associateship, partnership, or other practice opportunity. Hospital privileges must be available. Reply to: Dr. J. J. Hajdu, 1119 Tower Rd., Apt. 98, Halifax, N.S. Phone: (902) 429-3588.

EQUIPMENT FOR SALE

BRITISH COLUMBIA — Coquitlam. For sale or take over remainder of lease. All equipment necessary to start up an office. Pelton and Crane Executive units complete with dentist and assistant wings, amalgamators, suction, dentsply cavatron, dental-eze chairs, ceiling lights, x-ray, air compressor, Harvey chemiclave, plus much more. Contact: Dr. D. A. Semeniuk (604) 931-7303.

BRITISH COLUMBIA — Nanaimo. Weber Versalette unit; S. S. White Master unit; Dentsply 230 volt suction; Ritter Vega chair; Mighty Midget Oven; Coles Electrosurge; Silimat; 2 Castle Dental Lamps; High and Low Speed Handpieces. Reply to: Dr. Jack W. Tarr, 170 Wallace Street, Nanaimo, B.C. V9R 5B1.

PENNSYLVANIA: *Using Electrosurgery?* Our electrodes fit all models and are one price, \$2.50 each. Send for electrode order chart. The Electrode Factory, P.O. Box 252, Wynnewood, PA 19096, U.S.A.

MISCELLANEOUS

FRANCE: French Manufacturer of a top quality line of Diamond Burs and Handpieces, established for 30 years, seeks Canadian distributor on exclusive basis. Write to: Societe Dentaire Capitol Diamond, 82 Quai Prevost, Chelles 77, France.

MANIT^{BA}
CIVIL SERVICE COMMISSION

DENTISTS — CANADA

Applications are invited from graduate dentists to participate in the Province of Manitoba's Department of Health and Social Development's preventive-treatment programs. The programs consist of comprehensive treatment services combined with preventive education and are provided in the main through the Manitoba Children's Dental Program. Services include examinations, radiographs, prophylaxes, restorations, stainless steel crowns, endodontics, oral hygiene evaluation and other related services. Services are provided through a team approach, by dentists, dental nurses (New Zealand type), and support staff of dental assistants in both permanent and temporary dental clinics located for the most part in elementary schools.

Positions are located outside of Winnipeg; travel is involved. Modern dental equipment, support staff, hand instruments, materials, uniforms, etc., used in the clinics are provided by the Department. Travelling and living accommodation away from a home base are provided. Full time staff are entitled to regular Civil Service fringe benefits.

QUALIFICATIONS: Upon employment, registration and licensure to practise dentistry in Manitoba. Some experience in private or public health dentistry required. Postgraduate training in dental public health or equivalent preferred for Regional Dental Officer position.

SALARY: Dependent on qualifications
Dentist 2 (Clinical Dentist) \$24,618-\$30,800 per annum
Dentist 3 (Regional Dental Officer) \$25,733-\$32,238 per annum

APPLY IN WRITING REFERRING TO NO. FD 005 TO:

Civil Service Commission
Province of Manitoba
904 - 155 Carlton Street
Winnipeg, Manitoba R3C 3H8
Canada

work overseas ...join CUSO



If you are a medical professional, we need you. CUSO is looking for people who are willing to work overseas sharing their skills with those who need them most. CUSO workers usually combine practical application of their skills with training duties. But in the end, they learn as much as they teach.

We need:

**DENTISTS FOR COMMUNITY
DENTAL HEALTH PROGRAMMES
IN JAMAICA**

Two year contracts are standard. Salary generally equals a local worker's in a similar job. Couples and families are eligible, but families with pre-school children are easier to place. CUSO pays for life insurance, health and travel expenses and an allowance for re-settlement in Canada.

WANT TO GET INVOLVED?

CONTACT: CUSO Recruitment: 201
151 Slater Street
Ottawa, Ontario K1P 5H5

DENTIST

**FOR THE POSITION OF
AN ASSISTANT TO THE REGISTRAR
OF**

**THE ROYAL COLLEGE
OF DENTAL SURGEONS
OF ONTARIO**

Duties will include the administration of continuing education courses for dentists and hygienists and assisting in the co-ordination of auxiliary training programmes. This is a full-time position; salary and commencement date to be arranged.

Applications should be addressed to:

**The Executive Committee
The Royal College of Dental Surgeons
of Ontario
230 St. George Street
Toronto, Ontario
M5R 2N5**

AMOSAN OXYGEN POWER PACK.

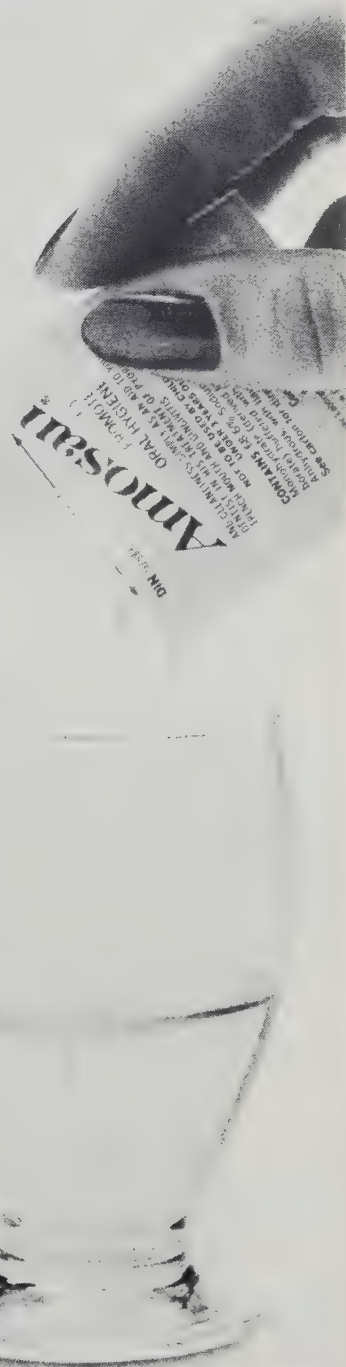
**For pyorrhea,
trench mouth
and gingivitis.**

Amosan® delivers more oxygen to the gums, a minimum 162mg per packet. A vigorous rinse with a single premeasured packet of Amosan in just 1 oz. of water exposes all interproximal areas and gingival margins to this effective adjunctive treatment. Send for your free dentist's samples of Amosan, the whole-mouth treatment.

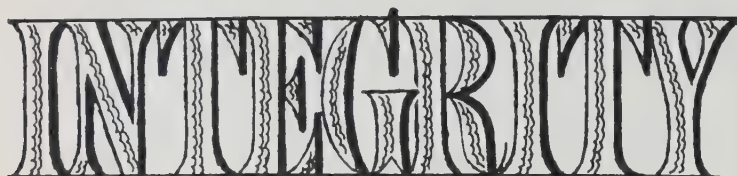
Amosan®

Cooper

Cooper Laboratories Limited
Boisbriand, Quebec.



WHAT PRICE



In some instances it can be expensive — but well worth it.

In the distribution of dental equipment and supplies, it need not cost a penny extra.

Ash Temple is the oldest distributor of dental equipment and supplies in Canada, with over 80 years of service.

Why have we become the largest and oldest? Integrity has to be the main factor. The dental profession would have cast us aside many years ago if they had not found us to be dependable.

Our Problem Solvers are located in all major centers across Canada, ready to give prompt service — to advise dentists on new equipment and supplies and more efficient design of operatories.

Satisfaction is your Guarantee

Ash Temple LIMITED

243 COLLEGE ST. TORONTO, ONT.
SERVING CANADA FOR OVER 75 YEARS

LARGE ENOUGH TO
SERVE YOU WELL . . .

**FULL SERVICE
SUPPLIER**

. . . SMALL ENOUGH TO
SERVE YOU PERSONALLY

ADVERTISERS' INDEX

Ash Temple	92
Block Drug Co. Canada	43, 64, 77
L. D. Caulk Co. of Canada	71, 72
Colgate Palmolive Ltd.	51
Commerce Drug Canada	82
Cooper Laboratories	91
Denco	47
Dentsply International	40, 61, 78
Eaton Laboratories	IFC
Charles E. Frosst	45
Kodak Canada Ltd.	IBC
Lever Brothers	80, 81
Medifacts Ltd.	55
C. V. Mosby	87
Nobilium Products of Canada	49
Pelton and Crane	OBC
Procter and Gamble	39
Pfingst and Co. Inc.	89
Professional Pharmaceutical Corp.	90
Siemens Electric	59
S. S. White	52, 53

Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.

FACULTY OF DENTISTRY
UNIVERSITY OF WESTERN ONTARIO

Assistant Professor Oral Surgery

The Department of Oral Surgery is seeking a replacement full-time faculty member. Responsibilities of the post include teaching, research and the provision of oral surgery cover for one major teaching hospital.

Applications should be submitted with curriculum vitae to:

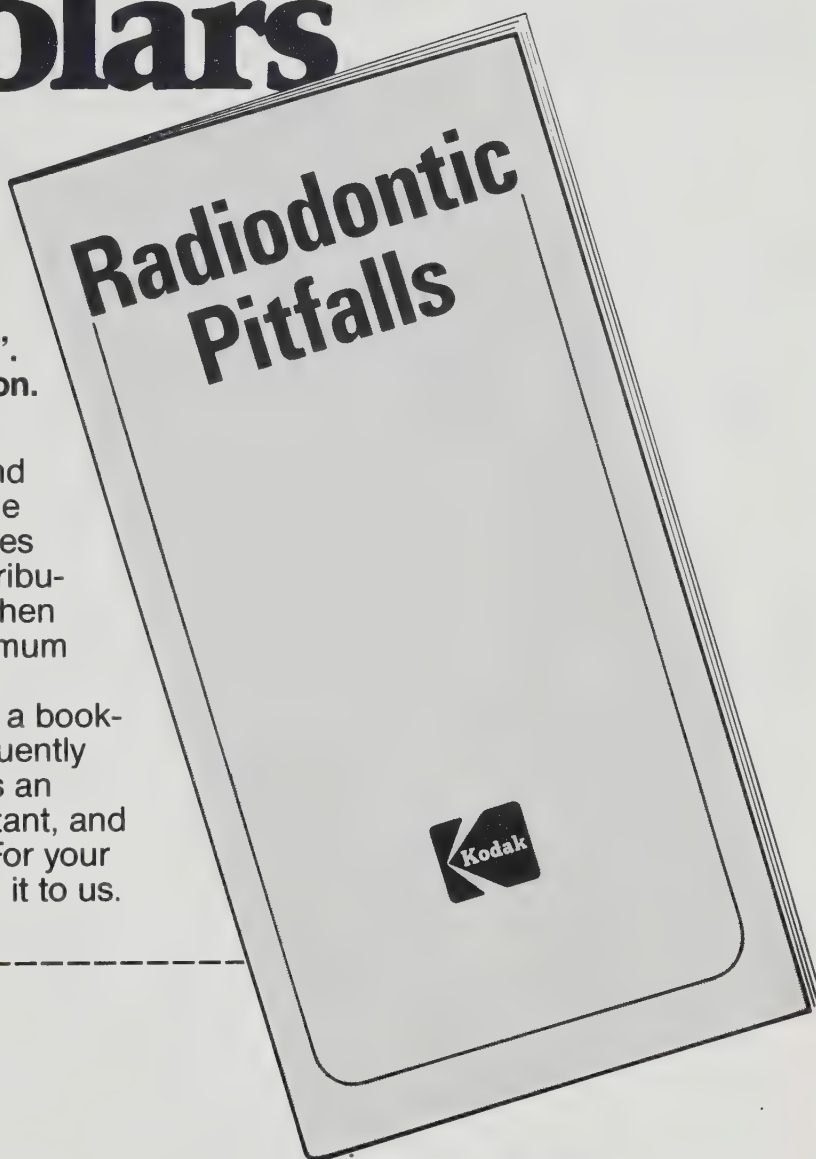
*Dr. A. G. Parnell, Department of
Oral Surgery, University of Western
Ontario, London, Ontario N5A 5B7.*

How to sharpen Mrs. O'Malley's molars

The answers are in
Kodak's booklet "Radiodontic Pitfalls".
It's yours just for sending in the coupon.

Informative dental radiography begins with a high quality X-ray film and the proper exposure. But that's only the beginning. Proper processing completes the picture. It makes an essential contribution to the quality of the image. And when film is properly processed, only a minimum of exposure is required.

To help you, we've put together a booklet that covers the problems most frequently encountered in dental radiography. It's an excellent manual for your dental assistant, and a good refresher course for yourself. For your copy, just fill out the coupon and send it to us.



☐ Please send me my copy of Radiodontic Pitfalls.

Radiography Markets
Kodak Canada Ltd.
3500 Eglinton Avenue West, Toronto, Ontario
M6M 1V3

NAME _____

ADDRESS _____

CITY _____

PROV. _____ POSTAL CODE _____



Official
Photographic
Consultant
to the 1976
Olympic Games

A commitment to quality

FIRST AID TO THE HEALING ARTS.



The Chairman by Pelton & Crane. More pleasing to the eye. Designed for complete relaxation, and upholstered in a special breathable fabric for extra comfort. Reversible seat cushion for longer wear. With up and down motion, plus a unique traversing capability of 14 inches. So the doctor can position the patient at the best angle for convenience and efficiency.

The Chairman. One of a group of Pelton & Crane products for effective dental practice with demonstrable advantages over others in the field. Advantages that could have great advantages for you.



Pelton & Crane
P.O. BOX 3664 CHARLOTTE, N.C. 28203

DENTAL JOURNAL DENTAIRE

J.O.T. LIBRARY
SERIALS DEPT.
TORONTO ONT
M5S 1A5

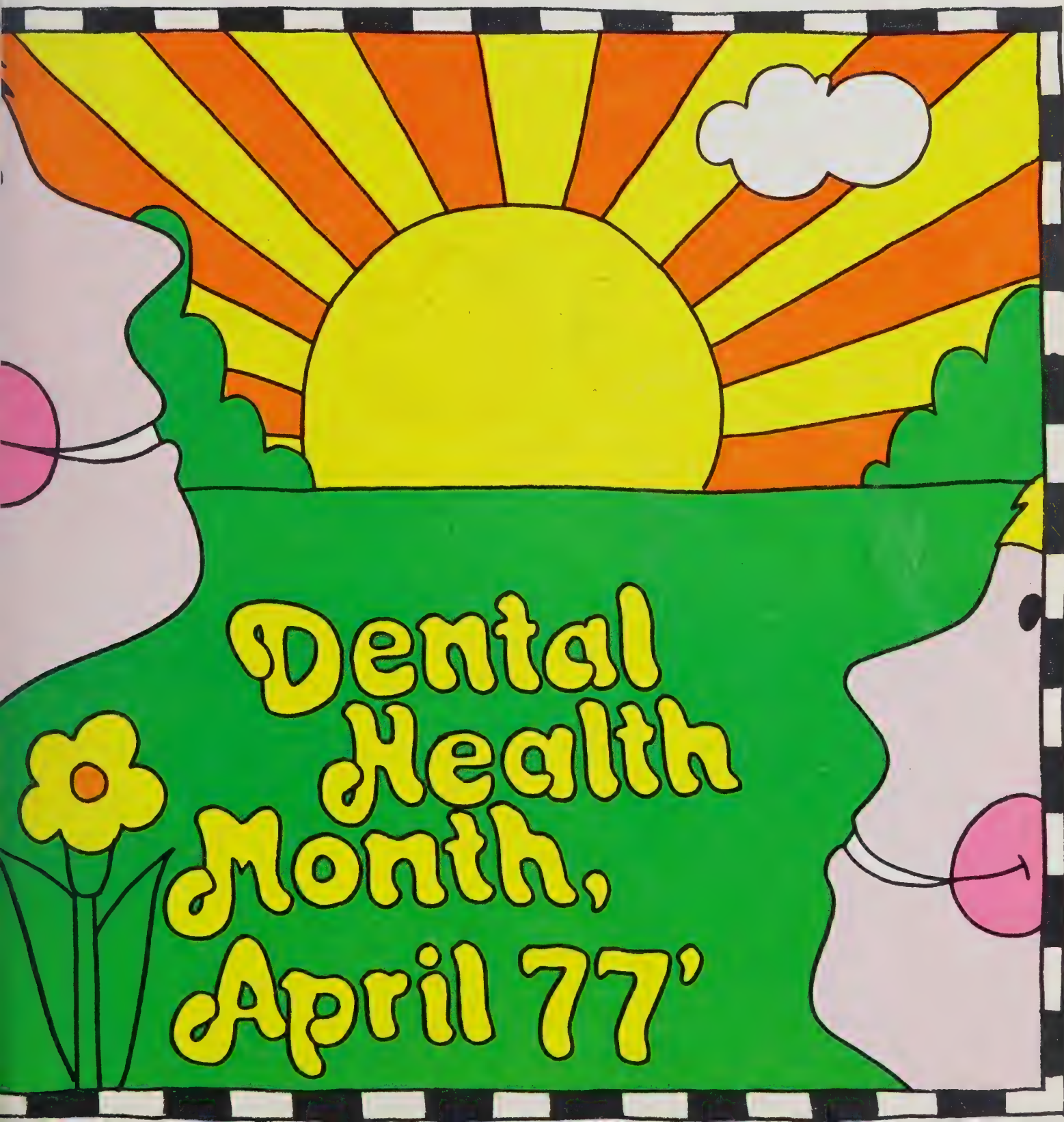
B

au destinataire
RETOURNER A
L'EXPEDITEUR
Port payé

if Undeliv
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed.

March/Mars 1977/Volume 43/No 3

Canadian Dental Association/Association Dentaire Canadienne



SIEMENS

What do dentists tell dentists about their Siemens X-ray equipment?

One of the nicest things about making a discovery is the opportunity it provides for sharing your find with a colleague. Which is one reason you find so many Siemens owners talking about the unmatched versatility, precision, and long-term investment value of their Siemens X-ray equipment.

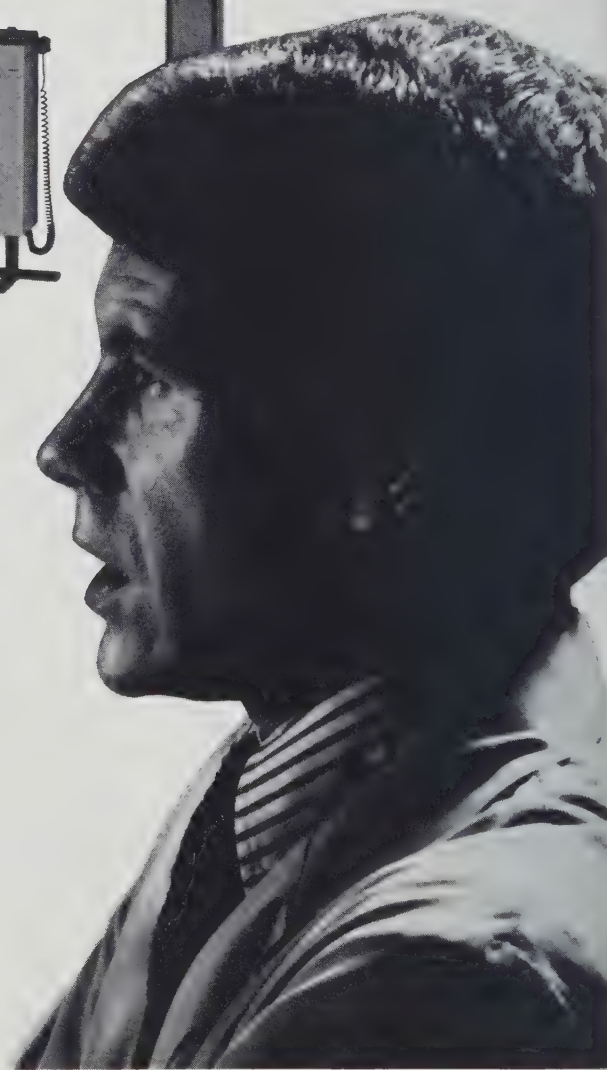
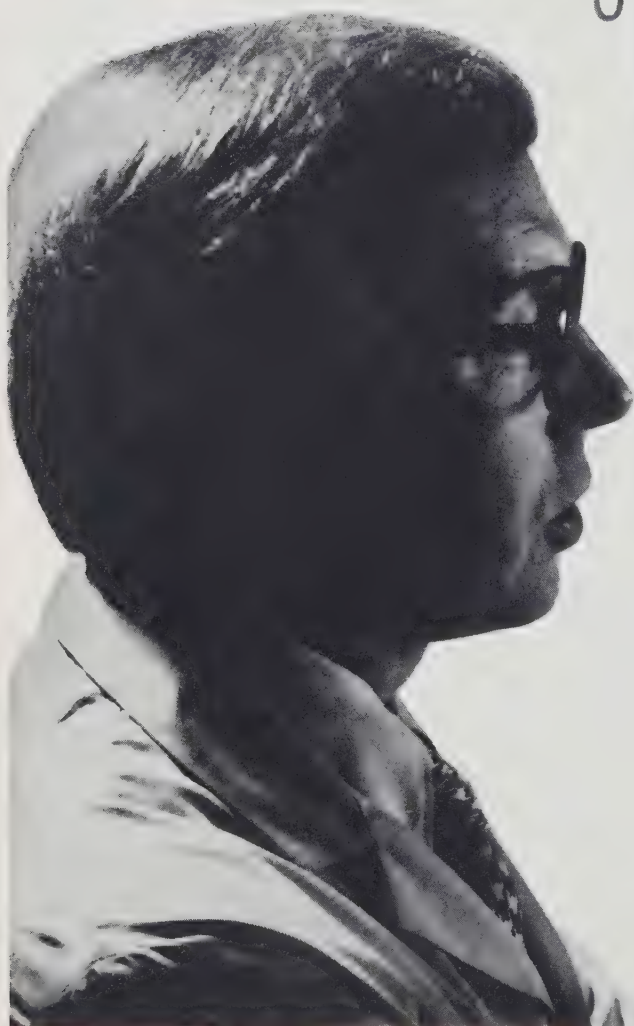
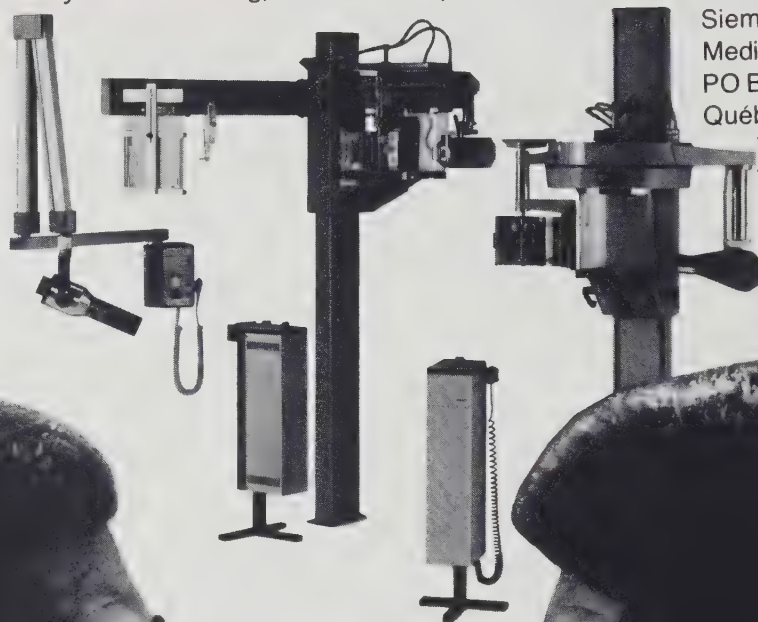
Orthopantomograph™ for example, performs more diagnostic procedures than competitive models. And it accommodates patients of any size – standing, seated or even in a wheel chair or prone on a stretcher – without special adaptations. For all their versatility, Orthopantomograph systems take up significantly less space

than comparable units. And they're easier to install.

The Orthoceph™ Panoramic Cephalometric unit offers lateral skull studies and panoramic films in one easy-to-use unit.

For complete information on the full range of Siemens products for dentists – including Heliodont intraoral X-ray units with automatic dosage control and easy-to-use film processors that handle film sizes up to 8" x 10" – see your full service dental dealer.

Siemens Electric Limited
Medical Systems
PO Box 7300, Pointe Claire
Québec H9R 4R6
Tel: (514) 695-7300
Telex: 05-822778



Prevention between visits



Brushing and flossing. Good diet. And CREST.

The at-home contribution to preventive dentistry between professional visits.

CREST has the actual research and recognition of effectiveness.

In fact, CREST has more extensive research than any other fluoride dentifrice, and the only clinical research to prove *added* anticaries protection... over and above the protection provided by office-applied fluorides. Give your patients MORE protection... recommend clinically proven, clinically tested CREST.



"Crest has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."— Canadian Dental Association.



Leadership in research=Confidence in Crest

© 1976 PROCTER & GAMBLE, TORONTO CAS-381

**Of course she's
too young to be
wearing a denture.**

**But since she must,
give thanks for modern
prosthodontia and
prosthetic products like
Trubyte® Bioblend® Anteriors.**

When a denture is the only alternative, Trubyte
Bioblend Anteriors help to compensate...

You can show your patient how completely
natural her smile will appear...involve her
in the psychologically reassuring process of
cosmetic tooth selection...give her the confidence
she needs to make a normal and healthy transition
to the denture experience.



Full color case study of this
denture patient available.

*Trubyte® Bioblend® Anteriors
in porcelain and plastic.*

TRUBYTE®

D Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1977 Dentsply International Inc.
All rights reserved.



JOURNAL

of the Canadian Dental Association
de l'Association Dentaire Canadienne
March/Mars 1977/Volume 43/No 3

PUBLISHER/Canadian Dental Association
SCIENTIFIC EDITOR/R. S. Turnbull, DDS
EDITOR/Diane Charter
FRENCH SCIENTIFIC EDITOR/Robert Lambert, DDS

MANAGING EDITOR/ADVERTISING/Anna Spencer
EDITORIAL SECRETARY/Mary Maxwell
CLASSIFIED ADVERTISING/Marie Cosgrave
CIRCULATION/Cathy Cronin

ISSN 0382-8514

Editorial

Preventive dentistry: its role in periodontal disease — Turnbull	100
--	-----

Special Feature

Report on Dental Students' Conference	115
---------------------------------------	-----

Regular Features

Announcements	96
Dentistry in the news	103
Deaths	108
Letters to the editor	111
FDI/CDA Congress News	112
Les actualités dentaires	118

Articles

Occlusal adjustment in orthognathic surgery: the team approach — Harper and Smylski	124
Immediate denture impression technique using zinc-oxide and eugenol and rubber base impression material — Chaney	130
Report of a case: A monostotic fibro-osseous lesion of the mandible — Trott, Walter and Baker	132

Classified advertising	135
------------------------	-----

Advertisers' index	138
--------------------	-----

Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1976 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454.

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association.

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1976 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22).

Veuillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences. Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise.

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Announcements/Avis

Canadian Dental Association

1977, Toronto, Oct. 22-28

Fédération Dentaire Internationale

1977, Toronto, Oct. 22-28

Canadian Meetings

Workshop in Clinical Hypnosis, St. Paul's Hospital Auditorium, Saskatoon, March 26-27, 1977. Sponsored by the Saskatchewan Society of Clinical Hypnosis. Contact: Dr. Max Brook, 507 Canada Building, Saskatoon.

College of Dental Surgeons of British Columbia, Annual Convention, Empress Hotel, Victoria, April 20-23, 1977. Contact: Kenneth L. Croft, Managing Director, 1125 West 8th Avenue, Vancouver, B.C. V6H 3N4.

NDEB announces 1977 examination dates

The National Dental Examining Board of Canada has announced the following 1977 examination dates:

1. Written examination May 24, 25 and 26, 1977 at selected Universities in Canada and U.S.A.
2. Preclinical examination May 30, 31 and June 1 at The University of Western Ontario in London.
3. Clinical examination June 2 to June 10 at The University of Western Ontario, London.
4. Preclinical examination August 15, 16 and 17 at McGill University in Montreal.
5. Clinical examination August 18 to August 26 at McGill University in Montreal.
6. Written examination October 24, 25, 26, 1977 at selected Universities in Canada and U.S.A.

The examinations in August at McGill University are conditional upon a sufficient number of applicants.

College of Dental Surgeons of Saskatchewan, Annual Convention

Regina, April 28-30, 1977. Contact: Dr. D. A. Graham, Convention Chairman, 811 - 105 - 21st Street East, Saskatoon, Sask. S7K 0B3.

Ontario Society of Periodontists and Canadian Academy of Periodontology

combined seminar, Chelsea Inn, Toronto, May 6, 1977. Clinicians: Drs. Tony Melcher, Richard Ellen and Robert Schallhorn. Topics to include oral biologic and clinical experimental research as it relates to clinical periodontology. Contact: Dr. Steven Richmond, (416) 491-6211 or Dr. Frank Compton, (416) 922-4223.

Ontario Society of Clinical Hypnosis

Advanced Workshop on Ericksonian Techniques of Hypnotic Communication with Drs. Bandler and Grinder. The Hyatt Regency Hotel, Toronto, May 7-8, 1977. Contact: Dr. E. Barnett, O.S.C.H., 243 St. Clair Ave. West, Toronto M4V 1R3. Telephone: 922-8300.

Ontario Dental Association, at Sheraton Centre (formerly Four Seasons Sheraton), Toronto, May 8-11, 1977. Mrs. W. C. Durham, 234 St. George St., Toronto, Ont. M5R 2P2.

Les Journées Dentaires du Québec, at Queen Elizabeth Hotel, Montreal, May 16-20, 1977. Dr. R. M. Lang, 5171 Decarie Blvd., Montreal, Que. H3W 3C2.

Third International Congress on Cleft Palate and Related Craniofacial Anomalies, at Royal York Hotel, Toronto, June 5-10, 1977. Congress Secretariat, 191 College St., Toronto, Ont. M5T 1P7.

Western Canada Dental Society, at Banff Springs Hotel, Banff, Alberta. July 3-6, 1977. Dr. D. Pedlar, Publicity Chairman, Western Canada Dental Society, 1711 - 4th St. S.W., Ste 303, Calgary, Alta. T2S 1V8.

Canadian Society of Oral Surgeons, Annual Convention

Hyatt Regency Hotel, Toronto, October 28-31, 1977. Contact: Dr. W. Prusin, Convention Chairman, 919 Ellesmere Rd., Scarborough, Ont. M1P 2W7.

Pacific Dental Federation Convention

July 23-26, 1978, Vancouver. Contact: Dr. Ken Neuman, President, Pacific Dental Federation, 1125 West 8th Avenue, Vancouver, B.C. V6H 3N4.

International Meetings

American Dental Hygienists' Association, at Boston, March 30 - April 3, 1977. Mr. John Venator, 211 East Chicago Ave., Chicago, Illinois 60611.

World Congress of Oral Implantology

at Cairo, Egypt, April 6-8, 1977. Alice Turner, International College of Oral Implantologists, Suite 7000, The Chrysler Building, 405 Lexington Ave., New York, 10017.

American Association of Endodontists

at Houston, April 13-17, 1977. Mrs. Eleanor L. Baker, P.O. Box 11728, Atlanta, Georgia 30305.

California Dental Association, World of Dentistry

annual scientific meeting, Anaheim, California, April 15-18, 1977. Contact: California Dental Association, P.O. Box 91258, Los Angeles, Calif. 90009.

Seminar on Syndromes of the Head and Neck

at Albert Einstein College of Medicine, April 22, 1977. Dr. Robert J. Gorlin, Professor and Chairman of the Division of Oral Pathology, University of Minnesota School of Dentistry will present seminar on "Clefting and non-clefting syndromes of the head and neck". Contact: Director, Postgraduate Dental Program, Albert Einstein College of Medicine, 1165 Morris Park Ave., Bronx, New York 10461. Telephone: (212) 430-2139.

Only Butler[®]

gives you a professionally
correct choice in
Dental Floss

Now you can recommend a Butler Floss
for every patient's need.

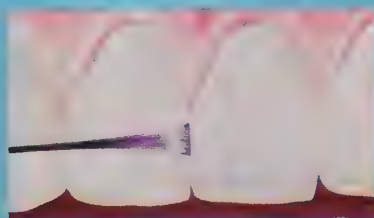


Floss has been colored for illustration purposes.



New Tuff-Spun[™] Shred Resistant Unwaxed Floss

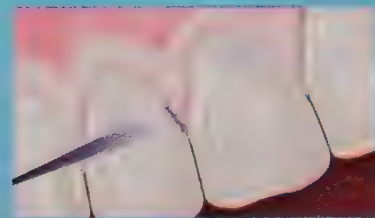
FOR MARGINAL IRREGULARITIES
Recommended for patients with
marginal or surface irregularities. This
thin, multi-strand floss is made by a
special process that strengthens it to
help keep it from shredding between
the teeth. Distinctive 50 and 100 yard
packages fit pocket or purse.



Bit O'Wax[®] Lightly Waxed Floss

FOR TIGHT CONTACTS

There's just enough wax on this new
floss to help it slip through tight
spaces, so it's less likely to leave
deposits. In every other way Bit O'Wax
works like Butler unwaxed floss. It has
the same slight "S" twist, the ability to
spread and flatten like tape, and the
same multiple-strand cutting edges to
effectively remove plaque. Available in
50 and 100 yard packages.



Original Dr. Bass Unwaxed Floss

FOR NORMAL DENTITION

Still best for plaque removal under
normal conditions. Pioneered by Dr.
C.C. Bass over 30 years ago, Butler
Unwaxed Floss is a thin, multi-strand
floss with a slight "S" twist that flattens
and spreads into hundreds of separate
strands, which act as cutting edges. It
gently scrapes plaque from tooth
surfaces and carries it away. Available in
50, 100 and 300 yard containers.

Butler[®]

John O. Butler Company

IN CANADA: 6426 NOTRE DAME ST. W. MONTREAL P.O. H4C 1V4, CANADA

**Butler dental flosses...
the professionally correct choice for every mouth condition.**

Available at better drug stores everywhere.

New York State Academy of Dental Practice Administration, April 22-23, 1977. Syracuse, New York. Mr. Rick Pereira, "How to harness the fires of change" and Dr. B. Lawrick, "The use of audio visuals". Contact: Dr. Milton E. Cohen, 72 Montessor Drive, Willowdale, Ont.

American Academy of Oral Medicine, at Toronto, May, 1977. Mrs. Joyce Guithues, 829 Hanamore Crescent, St. Louis, 63122.

U.S.C. Annual Dental Seminar of Mexico, at Hotel Ixtapan, Ixtapan de la Sal, State of Mexico, May 15-19, 1977. Topics include periodontal therapy, restorative dentistry, emergencies in the dental office, and oral surgery. Contact: Dr. Abraham Chisikovsky, Treasurer, XXX Seminario Anual del Grupo de Estudios Dentales U.S.C. de Mexico, A.C., Horacio 1840, Mexico 10, D.F.

Fourth Annual Alpha Omega Study Mission to Israel, including symposium on "newer concepts in oral biology and their clinical implications". Organized by the Hebrew University, Hadassah School of Dental Medicine, Israel, and the Toronto Alumni Chapter of the Alpha Omega Dental Fraternity, to be held in Jerusalem, May 19-20, 1977. Contact: Dr. Hart J. Levin, 2006 Bathurst St., Toronto, Ont., or Professor Isaac Ginsburg, Dean, Hadassah School of Dental Medicine, P.O. Box 1172, Jerusalem, Israel.

American Academy of Orthodontics for the General Practitioner, Inc., at Delavan, Wisconsin, May 23-26, 1977. Mrs. M. L. Watson, 3953 North 76th St., Milwaukee, 53222.

American Academy of Pedodontics, at Bal Harbour, Florida, May 29 - June 1, 1977. Merle C. Hunter, 211 East Chicago Ave., Suite 1235, Chicago, Illinois 60611.

The 4th International Congress of Dento-Maxillo-Facial Radiology, in Malmo, Sweden, June 4-8, 1977. Contact: Organizing Committee, 4th Inter-

national Congress of Dento-Maxillo-Facial Radiology, Malmo Convention Bureau, Skeppsbron 2, S-211 20 Malmo, Sweden.

Pain Control in Dentistry, World Congress, Mauritius Island, June 7-9, 1977. Contact: Dr. Paul Virapin, Executive Secretary, 15, avenue de Maurin, 34000 — Montpellier, France.

American Dental Association, 28th Annual Management Conference, at ADA Headquarters, Chicago, June 13-15, 1977. American Dental Association, 211 East Chicago Ave., Chicago, Ill., 60611, USA.

Third International Odontological Congress of the Brazilian Dental Association and First National and International Congress of the Odontological Services of the Armed Forces, Federal University of Rio de Janeiro, Brazil, July 15-21, 1977. Contact: Associacao Brasileira de Odontologia, Avenida 13 de Maio, 13-10 andar, conjuntos, 1001/2-5/116, Rio de Janeiro, R.J., Brazil.

International Association of Oral Myology, Fifth Annual Convention, Lodge of the Four Seasons, Lake Ozark, Missouri, June 18-21, 1977. Contact: Dr. John Howland, 457 Coventry Green, Suite 120, Crystal Lake, Illinois 60014.

American Dental Society of Europe, Rhodes, Greece, June 27 - July 2, 1977. Dr. James Molony, Secretary, 110 Harley St., London, W.1., England.

Swedish Dental Hygienists' Association, Sixth International Symposium on Dental Hygiene, at Stockholm, Sweden, June 30 - July 2, 1977. Symposium theme: plaque control. Working language: English. Eve Runsten, Secretary General, Sixth International Symposium on Dental Hygiene, c/o RESO Congress Service, S-105 24 Stockholm.

Hungarian Dental Association, Twelfth Congress, at Pécs, Hungary, August 25-27, 1977. Contact: Professor I. Szabo, 7621 Pécs, Dischka Gyozo u.5. Hungary.

International Epidemiological Association, Eighth International Scientific Meeting, at Las Croabas, Puerto Rico, Sept. 18-23, 1977. Dr. Carlo Luis Gonzalez, Program Secretary, Universidad de Los Andes, Facultad de Medicina, Centro de Estudios de Post-Grado, Merida-Venezuela.

International Association for Orthodontics, Annual Meeting, Bayshore Inn, Vancouver, B.C., September 21-25, 1977.

Dental Association of South Africa, Fifth International Scientific Congress, Stellenbosch, Republic of South Africa, Sept. 26-30, 1977. Contact: Dr. L. S. Maresky, Congress Secretary, P.O. Box 96, 7503 Parowvallei, C.P., South Africa.

New York State Academy of Dental Practice Administration Meeting, Hyatt Regency Hotel, Toronto, October 21-22, 1977. Clinician: Dr. Carl Reider, "A philosophy of Private Practice". Contact: Dr. Milton E. Cohen, 72 Montessor Drive, Willowdale, Ont.

Australian Dental Association, Jubilee Congress, Melbourne, Feb. 12-16, 1978. Contact: W. Don Hefron, Federal President, Australian Dental Association, 116 Pacific Highway, North Sydney, N.S.W.

Circulo Odontologico Del Sur (Southern Argentina Dental Society), Second International Congress and Third Socio-Economic Congress, Bahia Blanca, Argentina, May 25-28, 1978. International lecturers will deal with all clinical specialties. Contact: Dr. R. L. Ellis, Associate Professor, Department of Community Dentistry, University of Toronto, Faculty of Dentistry, 124 Edward St., Toronto, M5G 1G6.

New Zealand Dental Association, Ninth Biennial Conference, Christchurch, August 20-25, 1978. Contact: R. C. Service, Honorary Secretary, N.Z.D.A. Biennial Conference Committee, P.O. Box 1301, Christchurch, New Zealand.



You've finished his fluoride treatment. Now let Colgate's fluoride take over.

Colgate's* MFP^{*} fluoride gives your patients extra protection
to fight decay between check-ups.

It's a fact. Our clinical tests have shown that the regular use of Colgate with MFP fluoride **alone** significantly reduce the incidence of new caries. Used in conjunction with your topical application therefore, it follows there could be an even greater reduction. Colgate with MFP provides specific and significant advantages. Regular use of Colgate makes

teeth more **resistant to decay**. We believe that Colgate's MFP (sodium monofluorophosphate) is effective in converting tooth enamel apatite into fluorapatite (a calcium fluorophosphate) because of the chemical similarities of the two.

2. While the staining of teeth has been a problem associated with some dentifrices, it is reassuring to know that this is not a problem with

Colgate MFP.

3. Colgate MFP is known for its **fluoride stability**. Sodium monofluorophosphate is still present and effective even after three years.

So after you've completed your fluoride treatment, tell your patients about the protection that Colgate Dental Cream with MFP can provide. And give them a new fighting chance against decay.



"Colgate has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."

*TM Reg'd.

Canadian Dental Association.

Colgate-Palmolive Canada.

EDITORIAL

Preventive dentistry: its role in periodontal disease

As we embark on Dental Health month, let us examine the effect of preventive dentistry on the most common cause of tooth loss in adults — periodontal disease. Because periodontal disease is so ubiquitous and because there is insufficient dental manpower to adequately treat the disease and its sequelae, it is incumbent on the dental profession to concentrate on prevention.

The effect of plaque on the etiology of periodontal disease is well documented. Although the precise mechanism by which plaque causes the disease is still unclear, this fact does not preclude taking advantage of the evidence which proves that removal of plaque helps prevent and improve the disease process. Probably the best illustration is the classic experiment by Loe, Theilade and Jensen¹. They showed that withdrawal of toothbrushing in 12 healthy persons with excellent oral hygiene and clinically normal gingiva resulted in a rapid accumulation of debris on the teeth. Marginal gingivitis developed in all subjects in from 10 to 21 days without oral hygiene. Subsequently, efficient oral hygiene was re-instated and in approximately one week healthy gingival conditions were re-established and plaque reduced to pre-experimental levels.

Recent evidence has proven that the standard of oral hygiene after periodontal surgery was of the utmost importance in influencing healing and affecting the final result². In patients maintained on a meticulous plaque control program there was no recurrence of periodontal pockets over a two-year period. On the other hand, patients unable to maintain proper oral hygiene exhibited a gradual deterioration of the attachment apparatus. However, many dentists still do not give oral hygiene instruction to their patients but render only scaling and prophylaxis. Several studies have shown that oral hygiene instruction and a dental prophylaxis result in a much greater improvement in gingivitis and plaque reduction than prophylaxis alone.

Besides oral hygiene instruction, scaling and prophylaxis, patient education is crucial to the success of preventing periodontal disease. It is not sufficient for

patients just to be mechanically adept at plaque removal. They must have a basic knowledge of the detrimental effects of plaque on the periodontium to be sufficiently motivated to continue good oral hygiene. The educational aspect of prevention is one area that is still perhaps neglected in dental offices. Many busy practitioners claim they do not have time to explain to a patient the nature of plaque and its effect on dental disease. The situation is worsened by the inadequate fee offered in most fee schedules for patient counselling and also the fact that many dental insurance plans do not include this type of service in their covered benefits.

Research in preventive dentistry is very active and one of the most promising developments is the use of antimicrobial agents to inhibit plaque. Chlorhexidine gluconate is probably the most effective and numerous studies have demonstrated that daily mouthrinses resulted in the inhibition of plaque development and the resolution of gingivitis. The side effects of staining of teeth and altered taste sensation occur in some instances, however, these are reversible. Although chlorhexidine has been used fairly extensively in the Scandinavian countries as a mouthrinse and in tooth paste, it is not available for general public use in North America. Research is continuing and perhaps it will be available after further tests are completed.

The dental profession can be proud of the research advances made in preventive dentistry and during Dental Health month let us all continue to make a real effort to be a truly preventive profession.

Dr. Robert S. Turnbull,
Scientific Editor

1. Loe, H., Theilade, E. and Jensen, S. B. Experimental gingivitis in man. *J Periodont* 36: 177-187, 1965.
2. Nyman, S., Rosling, B. and Lindhe, J. Effect of professional tooth cleaning on healing after periodontal surgery. *J Clin Periodont* 2: 80-86, 1975.

FIRST AID TO THE HEALING ARTS.



The Executive by Pelton & Crane.

A major advance in dental treatment procedure for both doctor and patient. Created by a dentist to centralize all the key components of care into an efficient modular unit that adapts to almost any room dimension. And to replace the cold, clinical look with furniture styling as beautiful and versatile as it is practical. The results: a more relaxed patient, a more productive doctor. Available in a range of designs from classically elegant to contemporary bold.

The Executive. One of a group of Pelton & Crane products for effective dental practice with demonstrable advantages over others in the field. Advantages that could have great advantages for you.



Pelton & Crane
P.O. BOX 3664 CHARLOTTE, N.C. 28203



The CLASSIC™ Chair can make your patient feel better about dentistry.

When a patient enters your operatory and sees the CLASSIC for the first time, she may well get the idea that somehow this appointment is going to be different from all the others.

Because the CLASSIC, among many other things, is an elegant piece of furniture.

Then she is seated. Normally, naturally, as in a favorite chair at home. The CLASSIC Chair's unique swivel seat and back eliminate the awkward leg straddle of other contour chairs.

And right away you have established a rapport that is most helpful in dental treatment. Apprehension tends to disappear. Calm and confidence prevail. You

and your patient can discuss the oral health program with a deeper sense of mutual understanding and cooperation.

All this of course is prelude to the treatment itself. And as treatment begins the CLASSIC proves itself a great *operating* chair. You can precisely position the patient for every procedure of two-handed and four-handed dentistry. The articulating headrest gives you optimum visual and manual access to all quadrants of the oral cavity.

What's it worth to have a more responsive, more receptive patient? Isn't *patient tension* one of the most difficult and most tiring aspects of the profession?

Well, the CLASSIC won't exactly make dentistry entertainment. But it does help to make things easier for your patient and this makes every appointment a little easier on you.

Is there a better reason to tell your dealer you want to see the CLASSIC?



The CLASSIC™
by Dentsply®

**DENTSPLY
Equipment**

D Dentsply International, York, PA

© 1976 Dentsply International Inc.
All rights reserved.

DIRECTOR OF DENTAL TREATMENT SERVICES FOR CANADIAN FORCES

National Defence Headquarters has recently announced the promotion of Lieutenant-Colonel James N. Wright to the rank of Colonel and his appointment as Director of Dental Treatment Services for the Canadian Forces.

Colonel Wright obtained his DDS from the University of Alberta in 1956. During his career he has been closely allied with dental education and with organized dentistry. He is a certified specialist in periodontics having received training at Walter Reed Army Medical Centre and Georgetown University in Washington DC and has a Master of Science in Dentistry degree in Oral Pathology from the University of Toronto. Colonel Wright has served as an instructor in Endodontics and as Head of the Department of Periodontics

at the Canadian Forces Dental Services School. He also was the Assistant Chief Instructor and Head of the Departments of Periodontics and Oral Medicine on a special re-training program for Czechoslovakian dentists which was conducted at the University of Western Ontario in 1969-70.

Colonel Wright served on the Canadian Dental Association Post-graduate Accreditation Survey Committee in 1973 and for the past two years has been the CFDS alternate to the Canadian Dental Association Board of Governors. He has also lectured extensively at the national and provincial levels, and at local dental meetings.

During his career in the Canadian Forces Dental Services Colonel Wright has served as Base Dental Officer on air



Colonel J. N. Wright

bases at Clinton, Ontario, and Cold Lake, Alberta, at sea with the HMCS *Ontario*, and as Senior Dental Adviser to the United Nations Emergency Force in the Middle East.

Prior to his present appointment Colonel Wright was Special Projects Officer for the Director General of Dental Services. He presently resides in Ottawa.

EXECUTIVE COUNCIL ANNOUNCES APPOINTMENT OF DR. J. G. D'AOUST AS CDA LIBRARIAN

The Executive Council of the Canadian Dental Association is pleased to announce the appointment of Dr. J. G. D'Aoust as Librarian. Dr. D'Aoust will look after all services provided by the Sydney Wood Bradley Memorial Library, located in the CDA's Ottawa headquarters at 1815 Alta Vista Drive.

Dr. D'Aoust was in active practice in Buckingham, Quebec, for 30 years. He received his Bachelor of Arts degree from the University of Ottawa and his DDS from the University of Montreal. From 1940 to 1945 he served with the Canadian Officer Training Corps.

He is an active member of the Canadian Dental Association, the Order of Quebec Dental Surgeons, and the Association of Dental Surgeons of Quebec. He was formerly on staff at the St. Michael Hospital and was a member of the Hull, Ottawa and Montreal dental societies. In 1961, Dr.

D'Aoust was the delegate for the bicentenary of Pierre Fauchard at the congress held at the Ecole Dentaire de Paris in France. He is the author of an article on radiologic research published in *Oral Health* in 1963 and is proud of his status as an "Honour Member" of the Canadian Fund for Dental Education.

The Association's move to its new Ottawa headquarters coincides with the 25th anniversary of the Sydney Wood Bradley Memorial Library. Dr. Bradley, who died in 1967, was the anonymous benefactor through whose generosity the library had been established at the CDA 16 years before. His will stipulated a generous donation to the library and requested that it bear his name. A handsome plaque on the library door fulfills this request.

The move from Toronto to Ottawa naturally created a temporary delay in



Dr. J. G. D'Aoust

library services. Dr. D'Aoust is happy to announce that the relocation is now complete, all services are ready to go and he is most anxious to serve dentists from coast to coast.

FEDERAL GOVERNMENT ANNOUNCES TWO STUDENT EMPLOYMENT PROGRAMS IN HEALTH CARE FIELD

Health and Welfare Minister Marc Lalonde recently announced details on two student employment programs to be undertaken by his department during the summer. As part of the federal government's Student Summer Employment and Activities Program (SSEAP '77) approximately 510 students will be hired at a cost of \$1,348,000.

The Health Activities Summer Employment Program for Students (HASEPS) of the Health Programs Branch will provide funds to assist voluntary health and health-related organizations in hiring students of the health professions and other students who represent resources which are needed by the health field. The main objectives of the Health Activities Summer Employment Program for Students are to:

1. Provide students with a positive summer work experience in the health field;
2. Assist voluntary health and health-related organizations with the

gathering of new knowledge that relates to substantive improvements in the health of Canadians. This would include improvements in lifestyle, environment, human biology and health organizations as elaborated in *A New Perspective on the Health of Canadians*.

The \$748,000 program will create approximately 300 jobs for post-secondary students for up to 15 weeks work for each student. The program will be administered by the Health Programs Branch through the Canadian Public Health Association.

Voluntary health and health-related organizations should submit applications to the Canadian Public Health Association, 1335 Carling Avenue, Ottawa, Ontario, K1Z 8N8, before March 15, 1977. After applications are approved, voluntary organizations will be required to contact Canada Manpower Centres to obtain candidates for projects. Students should apply through the Canada Manpower Centres.

Non-medical use of drugs summer resources fund

This program is designed to involve students in the development and testing of more relevant community responses to problems associated with the use of alcohol, tobacco and drugs and to encourage research into specific problems surrounding the use of these substances.

The fund will provide employment for approximately 210 students at a total cost of \$600,000. All projects must be sponsored by an academic institution or social service agency, or by a recognized community group. Applications and awards are normally filed through the sponsor, although students who wish to do research may apply directly, indicating their sponsor(s).

The program is administered through the regional offices of the Non-Medical Use of Drugs Directorate located in Halifax, Montreal, Toronto, Winnipeg and Vancouver. Applications should be made to these offices by March 15, 1977.

Dr. W. G. McIntosh named Chairman of FDI/CDS Congress Organizing Committee

Dr. William G. McIntosh has been named Chairman of the FDI/CDA Organizing Committee for the 65th Annual World Dental Congress of the Fédération Dentaire Internationale to be held in Toronto, October 22-28, 1977, in conjunction with the Canadian Dental Association's 1977 National Convention.

The mailing address for FDI/CDA Congress headquarters is: P.O. Box 6423, Terminal A, Toronto, Ont. M5W 1X3. Telephone: (416) 967-5181.

FDI/CDA Toronto Congress News starts on page 112



Alpha Omega Dental Fraternity recently held its international convention in Vancouver, B.C. The Toronto Women's Auxiliary was honored by the Alpha Omega Foundation for its many contributions to the Foundation. Shown left to right are Dr. William Kampel, Chairman of the Alpha Omega Foundation and Past International President of the Alpha Omega Fraternity, Dr. Paul Chapnick, Alpha Omega Regent for the Toronto Regency and receiving the plaque for the Toronto Women's Auxiliary is Mrs. Paul Chapnick (Joyce) and Dr. Ronald E. Goldstein, Immediate Past International President of Alpha Omega. Alpha Omega is an international fraternity of 16,000 practicing dentists with more than 100 chapters throughout the world.

CFDE SUPPORT FROM DENTISTS HITS RECORD HIGH

Dentists personally contributed \$57,000 to the Canadian Fund for Dental Education in 1976 and topped the objective of \$55,000, according to a recent announcement by Dr. J. W. Neilson, Chairman of the Fund's Board of Trustees.

"Early last year our trustees decided that if dental education and research are to receive anywhere near the amount of assistance they need and deserve, dentists would have to tangibly demonstrate their faith in CFDE's ability to

provide it. Exceeding our objective and recording a 27 percent increase in professional support over 1975 is most gratifying and encouraging to all of us connected with the Fund. It certainly augurs well for the future of our profession," said Dr. Neilson.

"We will be providing complete information on all activities in our forthcoming annual report. However, in the meantime I am pleased to report that our total operational income in 1976 reached a record high of \$190,000."

Seminar will focus on basic cardiology

An intensive two day course utilizing a combination lecture-tutorial approach will be given at the Albert Einstein College of Medicine On Thursday and Friday, May 12-13, 1977, by Martin N. Cohen, M.D. This seminar is intended to provide the dental clinician with a basic understanding of cardiology. It is especially designed for the clinician who utilizes general anesthesia and/or advanced pain control techniques. Participants will be supervised in small groups and individually by Fellows in Cardiology.

For further information, contact: Director, Postgraduate Dental Program, Albert Einstein College of Medicine, 1165 Morris Park Avenue, Bronx, New York 10461, or call (212) 430-2139.

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association Retirement Savings Plan stood as follows on January 31, 1977:

<i>Common Stock Fund</i>	27.757
<i>Fixed Income Fund</i>	18.849
<i>Guaranteed Fund</i>	13.349

Total assets (market value) of the plan were \$23,959,477.63.

For further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ont. M5R 2P2.

TRACK RECORD

Still getting the old "Slow Delivery" and "Back Ordered" run around from your dental supplier?

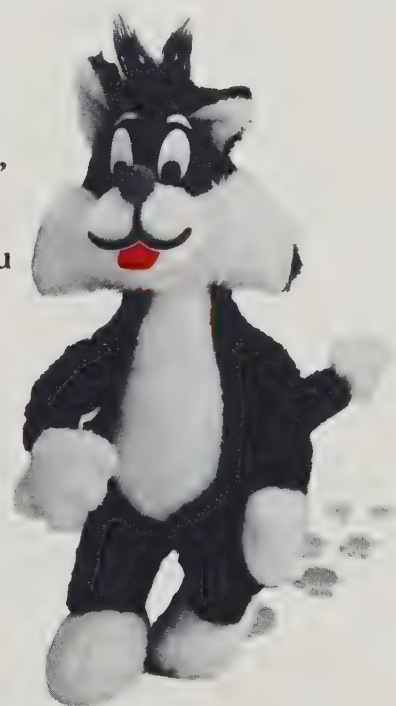
These days the smart money is on snappy service suppliers like Denco, with an impressive track record for fast turnaround of needed products.

Thanks to the increased efficiency of Denco's communication, stock control and delivery systems, your order can be placed and on its way the same day . . . that goes for the specials too.

Last year, Denco processed more than 11,000 special orders for dentists across Canada. This year, we've added 300 of those "specials" to our regular line.

When it comes to helping you keep your practice running smoothly . . . Denco doesn't pussy-foot around.

DENCO





UNIDENT Limited

UNIDENT LIMITED
PRESENTS
Spring Specials on
Quality ESPE Products.

Impregum Giant Pack (10)
.....\$135.00
buy one and receive Durelon
Liquid and Powder FREE
.....\$27.00 value

Scutan Double Pack..\$59.00
buy one and receive 4 Cavits
FREE\$8.00 value

COMBINATION SPECIAL
Ramitec Bite Registration
Paste\$25.00
Diaket Root Canal Filling
Material\$20.85
Tresiolan Desensitizing So-
lution\$11.95
buy three and receive single
Impregum FREE.....
.....\$18.00 value

Inquire about hundreds
of other Spring Specials
to:

UNIDENT LIMITED
P.O. Box 807
100 Wright Avenue
Dartmouth, N.S.
B2Y 3Z3
Tel. (902)463-4604
Full Service Supplier

Please send me...

- ☐ detailed information on
all your Spring Specials
- ☐ Impregum Giant Pack
- ☐ Scutan Double Pack
- ☐ Combination Special

Dr. **DENTAL LIBRARY**

St. **124 EDWARD ST.,**

City **TORONTO** Prov. **2**

Code _____

- ☐ Money order or cheque
enclosed.
- ☐ Bill me later.

Merchandise will be shipped
immediately upon receiving
order, postage paid.

LES JOURNEES DENTAIRES DU QUEBEC TO CELEBRATE TENTH ANNIVERSARY

Les Journées Dentaires du Québec has grown from a modest beginning to one of the largest annual dental conventions in North America, ranking 18th among 70 of the most prestigious dental conventions. It is the only completely bilingual French/English annual scientific and clinical meeting on the continent.

Begun as a local meeting through the joint efforts of La Société Dentaire de Montréal and the Mount Royal Dental Society during Expo '67 under the title of "Les Journées Dentaires dans Terre des Hommes," it was continued as a provincial meeting as Les Journées Dentaires du Québec under the auspices of the Quebec Dental Surgeons Association and in the last three years sponsored by the Order of Dentists of Quebec. It has reached its present status as the culminating annual effort of the year-round activities of the Committee of Continuing Education of the Order of Dentists of Quebec to update the education of the dental practitioner of Quebec.

Over the relatively few years, Les Journées Dentaires du Québec has attracted a growing attendance by dentists from all parts of Canada and the United States. Only last year, two eminent clinicians from France were invited to deliver papers resulting in attracting the attendance of several European dentists. As a result of this precedent which continues for 1977,

Les Journées Dentaires du Québec has now entered into negotiations with universities and dental associations in France for an interchange and possible twinning of scientific programming between the two francophone dental communities. It is expected that over 30 practitioners from Europe will attend the 1977 meeting which will be held May 16-20, 1977 at the Queen Elizabeth Hotel in Montreal.

To mark the 10th Anniversary, the scientific program of Les Journées Dentaires du Québec will feature some of the finest clinicians from Canada, the United States and Europe along with an appropriate social program, the highlight of which will be the President's Dinner Dance. All the dental auxiliary societies, including dental hygienists, assistants and technicians, will have special programs of particular interest to their members as well as participation in the overall programming.

Several of the specialty groups are planning their annual business and/or scientific meetings during Les Journées Dentaires and the Annual General Meetings of the Order of Dentists and the Quebec Dental Surgeons Association will be held at that time. The largest commercial exhibit area ever seen in Montreal will involve the participation of over 100 of the leading dental products manufacturers and distributors. An overall attendance of well over 4000 is expected.

THIRD INTERNATIONAL CONGRESS ON CLEFT PALATE TO BE HELD IN TORONTO

The Third International Congress on Cleft Palate and other craniofacial anomalies will take place in Toronto from June 5-10, 1977.

The Scientific Program is truly interdisciplinary and includes 205 papers divided amongst eight specialties. Thirty-nine per cent of these papers will be directly related to dentistry and orthodontics. There will be a strong basic science orientation as well.

In addition, there will be 84 teaching seminars, giving an opportunity for detailed discussion and instruction. There will also be 30 scientific exhibits, 21 films and a poster session. The entire Scientific program and teaching seminar list is published in a current brochure. For a copy of this, or further information, please contact: Congress Secretariat, 191 College Street, Toronto, Ontario, Canada, M5T 1P9.

Aim® works as great as it tastes

Aim proved effective. New clinical study* (3 years and 1,339 children) proves Aim an effective caries-reducing agent when compared to placebo.

Aim comparable to Crest®. Statistical evaluation of caries reduction by Aim and its fluoride control (Crest) yielded no evidence to suggest any real difference in efficacy between the two fluoride dentifrices.*

Aim tastes best. Previous studies also prove children prefer Aim's taste nearly 2-to-1 over other leading fluoride brands. Furthermore, some mothers tell us: it seems easier to get children to brush with Aim.

That's why Aim helps make your prevention program easier for you — more enjoyable for your patients.



A REPORT TO
THE DENTAL
PROFESSION

Extensive
clinical study
proves
efficacy of
Aim®

*Details of new clinical study have been mailed to the dental profession. Additional copies and professional price lists are available from:
Lever Detergents Limited,
Professional Services Department,
1 Sunlight Park Road,
Toronto, Ontario M4M 1B6



a product of:
LEVER DETERGENTS LIMITED
Toronto, Ontario M4M 1B6

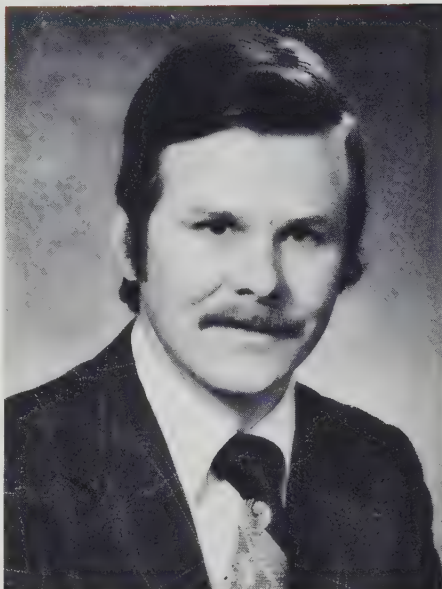
DR. GARY NOWAZEK NEW PRESIDENT OF MANITOBA DENTAL ASSOCIATION

Dr. Gary M. Nowazek of Brandon, Manitoba, was announced as the incoming President of the Manitoba Dental Association for 1977-78 at the 92nd Annual Meeting of the Association held February 4 and 5 at the International Inn.

Dr. Nowazek is a 1966 graduate of the University of Manitoba Faculty of Dentistry and has practised in Brandon since his graduation. He was first elected to the MDA Board of Directors in January of 1972 and has served as the elected representative of Western Manitoba on the Board since then.

Dr. Nowazek was elected to the executive in 1976 as Vice President.

Other members on the Board of Directors are: Dr. Ralph Crawford, Past President; Dr. Ben Goldberg, Vice President; Dr. Walker Shortill, Registrar; Dr. Harold Diamond, Dr. Robert Baker, all of Winnipeg; Dr. Vern Rosnoski, Russell, Manitoba; Ms.



Dr. G. M. Nowazek

Susan James, representative of the Auxiliary Associations; and Dr. Joseph Ryant, representative of the Minister of Health.



Dr. William G. McIntosh, former Executive Director of the Canadian Dental Association, was awarded an Honorary Membership by the Alpha Omega Dental Fraternity during the recent international convention held in Vancouver. Shown above, left to right: Dr. Murray Cornish, Past International President of Alpha Omega; Dr. McIntosh, and Dr. Ronald Goldstein, then President of the Fraternity.

Annual Convocation of International College of Dentists

The 1977 Annual Convocation and Dinner of the International College of Dentists, Canadian Section, will be held on the evening of Monday, October 24, at Pier #4 and Pier #5 of the Harbour Castle Hotel, Toronto. Cocktails will be served at 6:30 p.m. with dinner scheduled for 7:00 p.m.

Advance registration will be necessary. However, tickets will not be mailed but will be picked up at the door. Contact: Wm. J. Spence, Registrar, 3000 Yonge Street, Suite B-1, Toronto, Ont. M4N 2K5.

DEATHS

Allen, Ernest Fraser, 78. Vancouver, B.C. Royal College of Dental Surgeons of Ontario, 1923. 10-1-77. Survived by Connie (wife), and Derek (son).

Bourque, Jean Eudes, 51. Lac Megantic, Que. University of Montreal, 1953. 1-12-76.

Bowen, John Owens, 52. Aldergrove, B.C. University of Alberta, 1958. 15-1-77. Survived by Margaret (wife), Erin and Karen (daughters), Michael, Chris and John (sons).

Cordone, Joseph A., 61. Toronto, Ont. University of Toronto, 1943. 22-12-76.

Lipman, Daniel, 55. Toronto, Ont. University of Toronto, 1943. 16-1-77.

Loucks, Fred Stanley, 91. Toronto, Ont. Royal College of Dental Surgeons of Ontario, 1909. 23-1-77.

Marchand, Jacques, 66. Montreal, Que. University of Montreal, 1938. 10-76.

Menzies, Archibald Parker, 45. New-castle, N.B. Dalhousie University, 1956. 15-12-76. Survived by Jennett (wife), Jennifer (daughter), Ian, Robert and Graeme (sons).

Ramsay, Allen Robert, 66. Montreal, Que. McGill University, 1949. 1-12-77.

Caulk[®] Polyjel[®]

Nothing offers
greater accuracy,
greater stability.



101
For more
information
check number 101



Polyjel...

a new type of material
for crown and bridge impressions
—a polyether.

- Mixes and handles easily. No mess. No excessive flow.
- Olive green color for attractive, easy-to-read impressions
- Pleasant taste and odor.
- Firm consistency that displaces gingival tissue — to assure reliable impressions of difficult areas.
- Sets promptly (remove in five minutes)— saves chair time.
- Can be used in either stock or custom trays.
- Excellent dimensional stability.
- One consistency meets all needs.

Polyjel—for fast-setting, pleasant-to-make impressions that don't compromise on accuracy or stability. It may be just what you've been looking for.

Caulk® making life
a little easier
for dentists

Division of Dentsply International Inc.

LETTERS TO THE EDITOR

A word of praise

I congratulate you and your staff on producing a Journal with colourful stimulating covers. Dentistry as a health profession is a vital part of Canadians' day-to-day activities and should be presented in a realistic progressive manner. Drs. Sperber and Levine have expressed displeasure in viewing the six lovely Klondike dancers which greeted the profession last November, preferring teeth and coats of arms to anatomy and undergarments. Gentlemen, the teeth were there, or were you concentrating elsewhere? All six dancers presented caries free aesthetic smiles; "an in-the-flesh testimonial to the benefits of fluoridation and high quality restorative dentistry"; even their centric relations were right on. As for the lower limbs and undergarments, your eyes need not have shifted.

Dr. Sperber, I cannot accept your suggested correlation between six clothed dancers and the contents of

Penthouse. Your sample size is minimal, you do not have a control group, and I am sure you have not seen the most recent Penthouse.

*A. S. Richardson,
Associate Professor,
Department of Restorative Dentistry,
University of British Columbia*

Reaction to Xylocaine

I wish to bring to your attention a rather rare local anaesthetic reaction to Xylocaine. It is important to note that the patient reported symptoms after a dental appointment resulting in extreme eyestrain. The patient subsequently had photo-sensitivity in his eyes for several days quite markedly, and for at least a week, mildly. It is also important to note in this case that no

rash or other problem occurred from the drug.

The eye specialist he attended felt it was not a reaction to Xylocaine, however an allergist he saw subsequently found Xylocaine did result in a reaction.

This is a warning to other dentists not to ignore photo-sensitivity alone as a possible allergic reaction. If a patient does have photosensitivity after a local anaesthetic, then a consultation with an allergist is advised and discontinuation of that local anaesthetic.

It is recommended for these rare reactions that the patient should wear a Medic Alert in case he is involved in an accident.

I hope this information may be of some interest to your readers and I would be most pleased to make aware to other dentists of this local reaction.

*P. K. Kuliak, DDS
1489 Merivale Rd.,
Ottawa, Ont.*

Reports on high suicide rates among dentists proved wrong by new study

News media stories stating that dentists have a high suicide rate are refuted in a comprehensive new study of thousands of dentists' death certificates. The study was described in detail in the January 31 issue of the American Dental Association's Leadership Bulletin.

The results showed that during 1960-65, dentists had a composite death rate from all causes for each age group that was less than that of the U.S. male population — approximately two-thirds. And most importantly, deaths from suicide were not significantly different from that of the general white, male population.

The study, which is being prepared for publication, identified deaths during the six-year period within a total

dentist population of 102,700. Death certificates were obtained for all but 259 of the 8,945 known dentist deaths within that period. The vital status was determined for all but 1,370 or 1.3 per cent of the remaining dentist population at the end of the study period.

Follow-up procedures included use of obituaries, a national registry, state dental associations, state licensing agencies and state dental examining boards, city directories, the U.S. Post Office mailing list correction service, a commercial credit company and extensive telephone contacts.

The study was conducted by the Health Services Center, Temple University School of Dentistry, under sponsorship and funding of the Na-

tional Institute of Occupational Safety and Health.

The study confirms the belief that has been held by American Dental Association officials that the news media stories on supposedly high dentist suicide rates have not been based on reliable research. The Association has routinely checked the sources for such stories and invariably has found that they did not support the high suicide rate contention.

Additionally, the Association has the largest group life insurance program in the world. The program, which is almost 40 years old, has a broad base of actuarial experience for dentists and these figures belie the published statements on dentists and suicide.

CANADIAN DENTAL ASSOCIATION WILL HOST THE 65TH ANNUAL WORLD DENTAL CONGRESS IN '77

Close to 15,000 representatives of countries around the world are expected to meet in Toronto, October 22-28, 1977, when the Canadian Dental Association hosts the 65th Annual World Dental Congress of the Fédération Dentaire Internationale. The Congress will be held in conjunction with the CDA's 1977 National Convention.

Planning for the Congress is already well advanced and promises an excellent balance of stimulating scientific study and enjoyable leisure activities. The scientific program, which features an outstanding lineup of international speakers, is being developed around three main themes:

1. "Adhesion in the Oral Environment";
2. "A New Look at Pain and its Control";
3. "Oral Health and the Quality of Life".

The scientific program will officially get underway on the morning of October 24 with a panel discussion dealing with the first theme. Dr. D. C. Smith of Canada will chair this session which features the following speakers: Dr. L. Weiss of the USA who will discuss "Cell Adhesion"; Dr. F. C. M. Dreisens of the Netherlands on "Chemical Adhesion"; Dr. D. Beech of Australia on "Biophysical and Biochemical Considerations"; Dr. D. H. Retief of South Africa on "The Mechanical Bond" and, Dr. P. O. Glantz of Sweden on "Adhesion to Teeth".

In the afternoon an open session of the Commission on Dental Materials, Instruments, Equipment and Therapeutics will focus on "Adhesion in Dental Materials". Dr. J. W. Stanford, USA, is chairman for this session and the speakers include: Dr. D. C. Smith, Canada, on "Clinical Aspects of Suc-

cesses and Failures in Adhesion using Luting Cements"; Dr. I. A. Mjör, Norway, on "Biological Restrictions on Clinical Adhesion in the Oral Environment"; Dr. R. L. Bowen, USA, on "Composite Restorative Materials as they Relate to Adhesion in the Oral Environment". Drs. P. O. Glantz and I. L. Dogon will also participate in this session.

Also featured on the afternoon agenda are two lectures. Dr. Gordon J. Christensen, USA, will address delegates on the subject of "Pertinent New Clinical Techniques and Materials in Restorative Dentistry" and Dr. V. Andreev, Bulgaria, will speak on "Diagnosis and Treatment of Oral Cancer".

Pain and its control

The second main scientific theme of the Congress will be examined during a panel discussion on Tuesday morning, October 25. Dr. B. J. Sessle, Canada, is chairman for this session and will speak on the topic of "What is Pain and How does it Originate?" Other speakers are: Dr. B. Matthews, UK, on "Mechanisms of Dental Pain"; Dr. M. Weisenberg, USA, on "Psychological Mechanisms of Control"; Dr. J. Duncan, Canada, "The Use of Hypnotic Suggestion for the Control of Pain in Everyday Practice"; and Dr. R. Dubner, USA, on "New Methods of Pain Measurement and Control".

In the afternoon a symposium will be conducted by the Behavioural Science Group of the International Association of Dental Research to study the "Emotional Factors in the Patient/ Dentist Relationship".

On Wednesday morning, October

26, a panel discussion, chaired by Dr. D. B. Scott, USA, will deal with the third main scientific theme, "Oral Health and the Quality of Life". Speakers include: Drs. R. P. Ellen, J. Tonzich and D. L. Anderson, all of Canada; Dr. D. E. Barmes, Switzerland; Dr. E. Moller, Denmark; and Dr. J. Miller, UK.

In the afternoon a symposium, chaired by Dr. Lois K. Cohen, USA, will look at the "Quality of Life in Dentistry" as it pertains to the dentist, the dental student and dental auxiliaries. Participants are: Dr. G. Ormer, USA; Dr. R. Cohen and Ms. Iris L. Gold of Canada. An open session of the Commission on Dental Education will also be held in the afternoon to provide a look at the "Effectiveness and Delivery of Continuing Dental Education".

In addition, the afternoon agenda features a French-Language Program. Professor P. Desautels, Canada, will discuss a "Comparative Study of Amalgams with high Copper Content". Professor P. P. Giroux, Canada, will speak on "Preparation of Cavity for Amalgam with Pins", and Professor H. Sahel, France, will present an address on "Color Problems in Crown and Bridge Prosthesis".

Another lecture scheduled for the afternoon is entitled "Photography in Dentistry and at Play" and will be presented by Dr. G. E. Sparrow of Canada.

On Thursday morning, October 27, two symposia will be held. The first will focus on "Endodontics Today" and the second, sponsored by the International Association of Oral Surgeons, will discuss "The Impacted Third Molar". Participants in the second symposium are Drs. A. Antoni of the Bahamas, B. Aziz of Israel, J. Rud of Denmark, R. Weisenbaugh and R.



The 65th Annual World Dental Congress of the Fédération Dentaire Internationale will be hosted by the Canadian Dental Association in Toronto, October 22-28, 1977. Above, a night view of the City's daringly-designed City Hall.

Shira of the USA, and P. Chapnik of Canada. Dr. Chapnick will be moderator of the session.

The afternoon agenda features an open session of the Commissions on Public Dental Health Services and Dental Practice. Theme of this session will be "Dental Care Delivery Systems in Canada".

A symposium on the "Medical/Dental Problems of the Aged Patient"

will also be held with the following dentists and medical doctors taking part: M. Massler and S. Epstein, USA; M. Miller, H. Himel and I. Lightman, all of Canada. Dr. Lightman will be the moderator. A lecture on "Nutrition and Oral Health" will also be presented by Professor C. Enwonwu of Nigeria.

These are just some of the highlights of the scientific program planned for the World Dental Congress. The lectures, symposia and panel discussions

will be complemented by table clinics, motion pictures, scientific exhibits and a large dental trade show.

Scientific sessions will be presented at the Royal York Hotel, which will serve as the Congress headquarters, and at the Automotive Building on the grounds of the Canadian National Exhibition. Shuttle bus service will be operating between the exhibit buildings and Toronto hotels throughout the Congress.

New Products

STABILOK, A new system for building up broken down teeth.

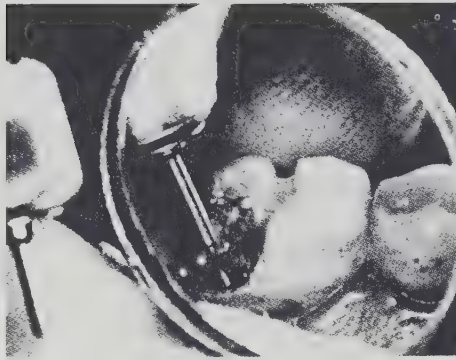
STABILOK self-threading screw-burs lock directly into any standard contra-angle hand piece, and remain in position until the screw is securely fixed in the dentin. No other interlocking components are required. As a result it is virtually impossible for any part to become dislodged and fall into the patient's mouth.

Only a few simple steps are needed for the insertion of a screw-bur into a pre-drilled hole.

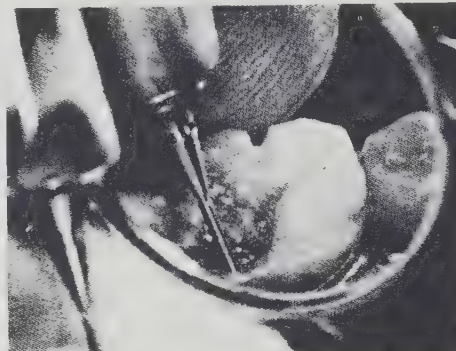
The STABILOK system enables free use of the mouth mirror since the only other instrument required is the hand piece. Even the most inaccessible parts of the mouth can be reached with ease. The illustrations emphasize the simplicity and speed of the STABILOK system.

A kit contains 1 self-limiting (2mm) bur and 20 self-shearing (4mm) pin burs.

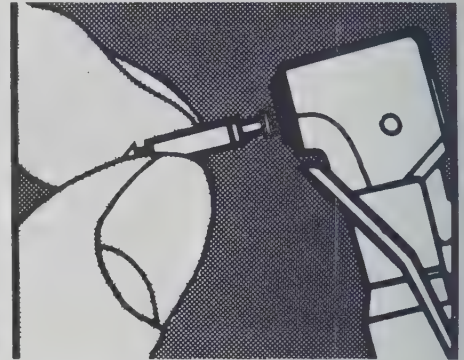
Available from WEIL . . .



Drill with 2mm self-limiting bur



Entre pre-drilled hole



Lock self shearing pin into contra-angle handpiece



Shears off at pre-notched neck automatically



OPTICALLY CORRECT, UNBREAKABLE SAFETY GLASSES

Protects faces of dentist, assistant and patient from bacteria laden water, medicaments and other debris emanating from high speed drills, water-sprays and ultrasonic prophylaxis instruments. Water spray contains many micro organisms which must be considered as potential pathogens for man. Therefore it is imperative to pro-

tect all concerned by using Safety glasses. Clear ones for the dentists and his assistant, TINTED ones for the patient. To: a) protect against the glare of the operatory lights, b) obscure the colour of objectionable blood, c) prevent minute particles irritating contact-lens wearers as well as protect against the same dangers as the operators. Our Safety Glasses are optically correct, unbreakable and inexpensive. They are packed in a box of three pairs either, clear or tinted green, or assorted.

Available from WEIL . . .

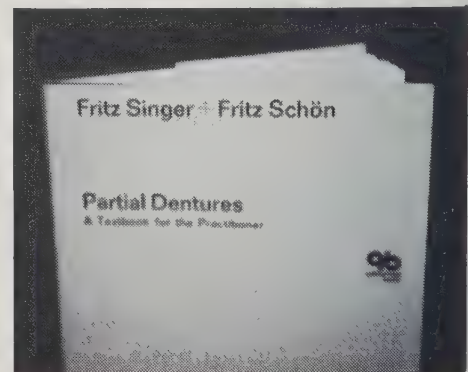
PARTIAL DENTURES — A Textbook for the Practitioner by F. Singer/F. Schoen

Written by two experienced prosthetists, this book is based on clinical experience with a large number of patients over many years. It describes and recommends sound established methods, deliberately ignoring over-complicated constructions. Theory is based on the findings of well known

specialists in the field; the laboratory phases are discussed in detail and sufficiently illustrated to ensure perfect fittings. A feature of the book is the colored atlas of the four Kennedy Classes, illustrating typical and improved designs in a series of clinical cases.

207 pages, 295 illustrations (202 color), partly in series, bibliography, name index, subject index, art paper 17 x 24 cm format, linen bound with gold stamping and protective cover, slip-case.

Available from WEIL . . .



Visit us at the:

B.C. Dental Convention — April 20-22

Ontario Dental Convention — May 8-11

Journées Dentaires du Québec — May 18-20

 **WEIL**

DENTAL SUPPLIES LIMITED

18 Grenville Street, Toronto, Ont. M4Y 1A4 (416) 925-5164



Delegates to the 1976 Canadian Dental Students' Conference. Seated, left to right: Ivano Ongaro, University of Alberta; Ann Savari, University of Toronto; William Hollingshead, University of Alberta, Conference Chairman; and Linda Teteruck, CDA Office of Student Affairs. Standing, left to right: Bernie Trischuk, University of Saskatchewan; Dr. Ivan Hrabowsky and Dr. Doug Yeo, CDA Committee of Student Affairs; Jean-Louis Paiement, University of Montreal; Art Worth, University of Western Ontario; David Maycher, University of Manitoba; Brian Mailman, Dalhousie University; David Campbell, McGill University; David Sweet, University of British Columbia. The photo was taken by Dr. Edwin Yen, Chairman of the CDA Committee on Student Affairs.

DENTAL STUDENTS' CONFERENCE HELD IN EDMONTON

Activities and priorities of the Canadian Dental Association, graduate and undergraduate insurance programs, and improved communication between students and the National Dental Examining Board were among the key issues under discussion during the 1976 Canadian Dental Students' Conference held in Edmonton, October 6-9.

William Hollingshead of the University of Alberta chaired the Conference which was attended by representatives of nine Canadian dental schools. Delegates included: David Sweet, British Columbia; Ivano Ongaro, Alberta; Bernie Trischuk, Saskatchewan; David Maycher, Manitoba; Art Worth, Western Ontario; Ann Savari, Toronto; David Campbell, McGill; Jean-Louis Paiement, Montreal; and Brian Mailman, Dalhousie. At the time of the Conference, Laval University was on strike and consequently no student delegate was selected to attend CDSC '76.

The Conference was held in the Beaver Room of Edmonton's Chateau Lacombe Hotel and the opening night reception was sponsored by the Alberta

Dental Association. As in previous years, the Conference was funded by the Canadian Fund for Dental Education through a special grant from Colgate-Palmolive Ltd. and was organized by CDA's Office of Student Affairs. CDA was represented by its Committee on Student Affairs: Dr. Edwin Yen, chairman; Dr. John Gourley, student governor; Dr. Ivan Hrabowsky, practitioner; and Dr. D.J. Yeo, dental educator. Linda Teteruck, secretary of the CDA Office of Student Affairs, also attended.

Channels for student opinion

Edwin Yen formally opened the business sessions with a discussion of the structure of the Canadian Dental Association and an explanation of the channels through which student opinion is expressed within the CDA. He stressed the importance of the Council on Education, the Executive Council and the Board of Governors as receivers of student input from the annual student conferences. Dr. Yen also emphasized the need to keep the lines of communication open between the dental

student and the dental profession via the national association.

The remainder of Dr. Yen's presentation dealt with a review of the report he had submitted to the CDA Council on Education, outlining the actions taken on the motions passed during the 1975 student conference.

The next topic on the agenda was CDA student membership and the consensus among delegates was that student membership drives at the various dental faculties were progressing well. Ann Savari of the University of Toronto and Art Worth of the University of Western Ontario reported on the highly successful conjoint student membership campaign operating in Ontario. Both stated that the CDA/ODA Graduate Package was providing a strong incentive for student membership in the province. Based on this information, delegates passed the following resolution: "that CDSC '76 recommend that each dental school representative investigate: 1. the possibility of developing a conjoint CDA and provincial dental association student membership, and, 2. the

development of a student membership graduate (benefit) package similar to the one offered by the ODA."

Insurance programs

Graduate and undergraduate insurance programs also came under discussion and delegates agreed that student members want more information from CDSPI in this area. The following two resolutions were presented and passed:

1. "That this conference recommends to CDSPI that they further investigate undergraduate student insurance programs and encourage a representative to visit each dental school to explain and promote said insurance programs."
2. "That CDSC '76 request the CDA/CDSPI Ad Hoc Committee to study improving benefits for undergraduate students regarding increased life insurance and other general insurance programs and to develop a new program to provide funds for a student who has to repeat a year in dental school due to sickness or accident."

Conference chairman William Hollingshead reviewed the report submitted by Art Plunz of the University of Saskatchewan who had attended the Teaching Conference on Practice Management held in Toronto in February, 1976. The delegates generally agreed that the dental school curriculum at most Canadian faculties is inadequate in this area and they offered a variety of suggestions on how this situation could be remedied. As a result of this discussion, the following resolution was adopted: "That CDSC '76 recommend that the individual dental school representatives approach their various dental societies and other pertinent organizations and individuals in an attempt to develop either curricular or extra-curricular courses in practice management as it pertains to the practicing dentist."

It was also suggested that the student delegates to CDSC '77 present a report at that conference regarding the status of the practice management program at their particular dental faculty and in their particular locale.

The Friday morning business session began with a panel discussion on "The Future of Dental Education and the Five Year Dental Curriculum". Participants included the following staff members of the University of Alberta's Faculty of Dentistry: Dr. Geldart, Professor of Community Dentistry; Dr. George Gibb, Professor of Restorative Dentistry; Dr. Pat McRae, Professor of Paedodontics; and Dr. Norman Thomas, Professor of Oral Biology.

Dr. Calvert, President of the National Dental Examining Board of Canada, then addressed delegates on the issues of mutual concern to both Canadian dental students and the NDEB. He indicated he was disturbed by criticisms levied against the NDEB by dental students and concerned by the misunderstandings which had grown between the two groups. He then stressed the importance of the NDEB as an independent national body assessing dental candidates and providing all Canadian dental graduates with a certificate of portability.

Correcting misunderstandings

Dr. Yen replied that the students were most appreciative of the need for the services provided by the NDEB. He then pointed out that perhaps many of the unnecessary misunderstandings could be corrected if a student representative was allowed to attend the annual NDEB meeting, present a brief on issues of concern to dental students as expressed at the annual student conference and be present for the full length of all discussions on the brief and other student-related items on the agenda.

Dr. Calvert seemed sympathetic with the student opinion that a more meaningful dialogue between students and the NDEB was necessary and stated he would present the student opinions to the NDEB Board.

Dr. Robert Gray, member of the CDA Board of Governors and Executive Council, addressed delegates during the Friday afternoon session. He informed them of the changes within CDA and the priorities established by the CDA during the past year. He also discussed some of the areas of concern

which CDA is presently dealing with, including: efforts to increase membership; rental of space in the new Ottawa headquarters building; government actions which effect the dental profession, such as the Anti-Inflation Board, the Combines Investigation Act, and tax deductions for dentists involved in continuing education programs. Dr. Gray also described efforts to revamp insurance and investment programs and regulations regarding advertising in the CDA Journal.

From Committee to Council

The concluding presentation on Friday afternoon was given by Dr. John Gourley, the CDA Student Governor to the Board of Governors. He reviewed with the delegates the issues of student interest discussed at the CDA Board Meeting in September. He also explained that the Board of Governors had discussed the idea of converting the CDA Committee on Student Affairs to a Council of Student Affairs with all the inherent rights and privileges accorded the status of Council.

Dr. Gourley cautioned the delegates to think carefully about this suggestion and the added responsibilities which it may imply. He explained the ways in which the lines of communication for student input within the Canadian Dental Association would be altered by conversion of the committee to a council.

After careful discussion the following resolution was passed: "That the Committee on Student Affairs become the Council on Student Affairs of the Canadian Dental Association."

Ann Savari of the University of Toronto was elected chairman for the 1977 Conference to be held in Toronto. Other officers elected were: Art Worth of the University of Western Ontario, CDA student governor; Jean-Louis Paiement of the University of Montreal, student representative to the CDA Council on Education; David Sweet of the University of British Columbia, student representative to the National Dental Examining Board; and David Campbell of McGill University, student representative to the Teaching Conference (if such a conference is held and funding is available).

TMS*

MINIKIN

T.M.S. MINIKIN FEATURES:

Minikin Self Shearing at 3mm.
Miniature Button Head for Retention



Available only through your dealer

WE
HAVE
COME
UP
TO
YOUR
FINEST
MINIKIN
NEEDS

*
REGD. T.M.

UNE BANDE ENREGISTREE SUR LA GESTION DE CABINETS DENTAIRE LANCE LE NOUVEAU PROGRAMME DENTAFAC TS

DENTAFAC TS, section audio-cassette du programme d'éducation permanente de l'Association dentaire canadienne, a offert en 1976 aux dentistes canadiens, 50 mini-cours traitant des divers aspects de l'exercice dentaire, ainsi que de nombreuses photos cliniques, diagrammes, tableaux et graphiques créés dans le but de faciliter la compréhension des textes oraux.

Le programme comprenait des causeries traitant d'orthodontie, d'endodontie, de prosthodontie et de pédodontie. Divers conférenciers parlaient de fracture dentaire, de fracture de l'os, de troubles radiculaires, d'alvéolite sèche, d'éruption de la dent, de chevauchement, de maintien d'espace, de diastème, de douleur et de soulagement de douleur, d'acupuncture, d'hypnose, d'analgésiques, d'anesthésiques, de barbituriques et de migraines.

DENTAFAC TS offrait également beaucoup d'information ayant trait aux bridges, au domaine de la radiologie, à divers ciments, aux drogues thérapeutiques, aux amalgames, à la résine et aux dentifrices. Les chirurgiens ont pu obtenir toute sorte de renseignements concernant le curetage, la gingivectomie et les lambeaux, la détérioration d'instruments, les hémorragies, la musculature, les os, la sclérotique et l'articulation temporomandibulaire. Le programme traitait de restaurations ainsi que de nutrition. En outre, à titre de thème d'intérêt professionnel ainsi que personnel, les dentistes ont pu écouter une causerie concernant le programme d'immunisation contre la grippe porcine.

Le programme DENTAFAC TS a été conçu sous forme d'une série de douze cassettes mensuelles, auxquelles les dentistes abonnés peuvent écouter à

leur loisir; grâce à ce programme et dans un nombre croissant de provinces, ils peuvent obtenir des crédits dont il est tenu compte lorsqu'il s'agit du renouvellement d'un permis d'exercer.

En 1977, le programme DENTAFAC TS sera plutôt orienté vers la transmission d'information pratique utile à la majorité des praticiens; en priorité, il sera question de la gestion de cabinets, de dentisterie préventive ainsi que des plus récents progrès s'appliquant aux techniques et aux produits dentaires.

Le Dr Paul Greenacre, nouvel éditeur de DENTAFAC TS, propose pour 1977 une liste impressionnante de contributeurs et de sujets. Certains des conférenciers américains les plus réputés dans le domaine dentaire participeront à l'enregistrement des bandes DENTAFAC TS, ainsi que de nombreux conférenciers canadiens dont l'autorité repose plutôt sur une vaste expérience pratique que sur une carrière universitaire. Ils parlent la langue courante du généraliste; ils connaissent ses intérêts, ses besoins et savent comment lui être utile.

Le programme DENTAFAC TS de janvier par exemple, comprend une conférence de 20 minutes prononcée par le Dr Hugh Doherty de Jersey City, N.J., autorité américaine reconnue dans le domaine de la gestion de cabinets dentaires. Le sujet dont il traite s'intitule "Comment choisir vos adjoints"; pour compléter sa présentation, le Dr Doherty a discuté des problèmes de perfectionnement des rapports entre le dentiste et son personnel ainsi que d'optimisation de la contribution apportée par les membres du personnel au cabinet dentaire. Il

s'entretenait avec Joanne Taskett, conseillère en gestion à New York. Le Dr W. C. Deacon d'Ottawa a parlé de la simplification du volume accablant de paperasserie qui fait partie de la gestion de tout cabinet très actif. Dans le domaine scientifique, il y a des causeries traitant de produits anti-inflammatoires et de relaxants musculaires.

Pour aider à rendre le programme audio-cassette encore plus utile aux praticiens, le Dr Greenacre a obtenu le concours d'un nombre de consultants, dont les Drs Bernard Dolansky d'Ottawa, pour le domaine d'endodontie; W. C. Deacon d'Ottawa, R. J. Prévost de Montréal et Brock Rondeau de London, domaine de l'exercice général; Neil Munro de Toronto, domaine de l'orthodontie et Harvey Freedman de Toronto, domaine de la parodontologie. Le Dr George S. Beagrie de Toronto, qui a quitté le poste d'éditeur du programme en décembre après cinq années de fructueuse conduite, conserve également la fonction de consultant, bien que l'Association internationale de recherche dentaire, dont il est le président entrant, constituera la principale direction de ses activités paraprofessionnelles pour la prochaine année ou même plus.

Grâce au programme DENTAFAC TS, plus d'un millier de dentistes sont actuellement au courant des tout derniers progrès dentaires et le Dr Greenacre a pour objectif, pour sa première année à titre d'éditeur du programme, de doubler ce chiffre. Jusqu'à présent, le programme n'existe qu'en langue anglaise mais, déclare le Dr Greenacre, on peut envisager la mise sur pied d'un programme parallèle en langue française à l'avenir.

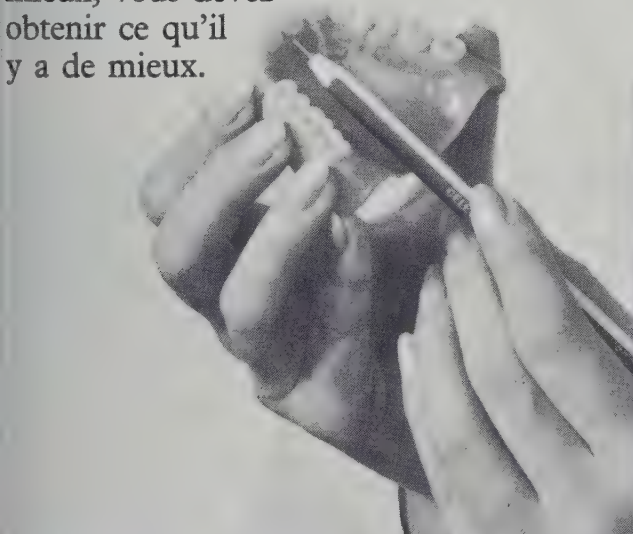
**C'est ici
que tout
nouveau dentier
doit faire
ses preuves.**

Cherchez le croissant.

Demandez à votre assistante d'examiner les
linguales antérieures. Si ce sont des dents
TRUBYTE®, elle verra une petite marque en
forme de croissant.

Si elle ne trouve pas le croissant,
le dentier ne comprend pas de
dents Trubyte.

Quand vous payez pour
avoir ce qu'il y a de
mieux, vous devez
obtenir ce qu'il
y a de mieux.



TRUBYTE®

*Créateur de d'excellents produits
pour l'art dentaire.*

D™ Dentsply Canada Ltd.
© 1976 Dentsply International, Inc.
Tous droits réservés

Cherchez le croissant (☾) sur ces marques populaires Trubyte®

ANTERIEURES▶	Bioblend®	Bioform®	Biotone®	New Hue®V.F.
--------------	-----------	----------	----------	--------------

LA BIBLIOTHEQUE SYDNEY WOOD BRADLEY DE L'ADC

L'établissement du siège social de l'ADC dans ses nouveaux locaux à Ottawa, coïncide avec le vingt-cinquième anniversaire de fondation de la bibliothèque. En effet, le Dr. Bradley décédé en 1967, fut le bienfaiteur anonyme grâce auquel cette bibliothèque avait pu être créée 16 ans auparavant. Son testament léguait un don appréciable à celle-ci en demandant en retour qu'elle porte son nom. Effectivement son souhait fut réalisé: le nom du Dr. Bradley figure sur la porte d'entrée de la bibliothèque.

La conseil exécutif est fier d'annoncer la nomination du Dr. J. G. D'Aoust à la fonction de bibliothécaire de l'ADC. Le Dr. D'Aoust fut pendant 30 ans en pratique privée à Buckingham, Qué. Il obtint son diplôme de Bachelier de l'Université d'Ottawa, et son doctorat de L'Université de Montréal. Il fit parti du Corps-Ecole



Dr. J. G. D'Aoust

d'Officiers Canadiens de 1940 à 1945. Maintenant, il est membre actif de l'Association Dentaire Canadienne, de l'Ordre des Chirurgiens-Dentistes du Québec, de l'Association des Chirurgiens-Dentistes du Québec; ex-

praticien du Centre Hospitalier St-Michel, ex-membre des sociétés dentaires de Hull, l'Ottawa, et de Montréal. Au mois d'octobre 1961, il fut délégué à l'Ecole Dentaire de Paris, lors du Congrès en l'honneur du bi-centenaire de Pierre Fauchard. En 1963, il soumettait un article de recherches radiologiques pour le journal "Oral Health." De plus, il est membre honoraire du Fonds Canadien pour l'Education Dentaire.

La décision finale de déménager la bibliothèque de Toronto à Ottawa, fut réalisée quelques jours seulement avant le départ. Nous avons dû faire diligence pour que tout soit complété dans un minimum de temps: construction de rayons et désempilage de livres et de périodiques. Cependant, aujourd'hui nous sommes ouvert et notre bibliothécaire bilingue est heureux de vous servir.

LES JOURNEES DENTAIRES DU QUEBEC CELEBRONT LEUR 10e ANNIVERSAIRE

Les Journées dentaires du Québec, commencées avec modeste, ont progressé jusqu'à devenir l'un des plus grand congrès dentaire annuel en Amérique du Nord, se classant 18 sur 70 des plus prestigieux congrès dentaires et premier au Canada en terme d'assistance de dentistes. C'est le seul congrès scientifique et clinique annuel complètement bilingue (français-anglais) sur le continent.

Commencées en réunion locale avec les efforts conjoints de la Société Dentaire de Montréal et le Mount Royal Dental Society durant l'Expo '67 sous le titre de "Les Journées dentaires dans Terre des Hommes", elles se sont continuées en réunion provinciale sous le nom de Les Journées dentaires du Québec sous l'égide de l'Association des Chirurgiens Dentistes du Québec et depuis trois ans, sous l'égide de l'Ordre des Dentistes du Québec. Ce Congrès est le point culminant annuel des activités du Comité d'Education permanente de l'Ordre des Dentistes du Québec qui

s'efforce de maintenir à la fine pointe du savoir la pratique dentaire au Québec. Depuis quelques années, les Journées dentaires du Québec ont attiré une assistance toujours grandissante de dentistes de toutes les parties du Canada et des Etats-Unis. L'année dernière, deux éminents conférenciers de France ont été invités et leur publicité a moussé l'assistance de plusieurs dentistes européens. Le résultat de ce précédent qui se continue en 1977 est la négociation entre Les Journées dentaires du Québec, les universités et les associations dentaires de France pour arriver à un échange possible jumelant le programme scientifique entre les deux communautés dentaires francophones. Nous attendons plus de 30 dentistes d'Europe en 1977 à notre congrès qui se tiendra du 16 au 20 mai 1977 au Reine-Elizabeth à Montréal.

Pour marquer le 10e anniversaire, le programme scientifique des Journées dentaires du Québec présentera quelques-uns des meilleurs conféren-

ciers du Canada, des Etats-Unis et d'Europe et des festivités de choix dont le clou sera la Soirée du Président. Toutes les sociétés dentaires auxiliaires y compris les hygiénistes dentaires, les assistants et les techniciens bénéficieront d'un programme spécial d'un intérêt particulier pour chacun ainsi que d'une participation au programme dans son ensemble.

Plusieurs groupes de spécialités projettent tenir leur assemblées annuelles (d'affaires ou d'ordre scientifique) durant Les Journées dentaires dont les assemblées générales annuelles de l'Ordre des Dentistes et de l'Association des Chirurgiens Dentistes du Québec.

La plus grande aire d'exposition commerciale jamais vue à Montréal verra plus de 100 chefs de file manufacturiers et distributeurs de produits dentaires. Une assistance totale de plus de 4000 personnes est attendue.



“...but
if you feel
any pain,
take one or two
222* tablets.”

Not every patient needs an analgesic after dental care — but some do, even though you have done everything possible to avoid any patient discomfort.

When a patient is in pain, or when there is a possibility that pain will occur later, suggest 222* tablets.

222* is a reliable analgesic — you and your patient can depend on it.

INDICATIONS: For relief of mild to moderate pain, fever and inflammation as in influenza, common cold, low back and neck pain, headache, trauma, following dental and surgical procedures.

DOSAGE: Adults — 1 or 2 tablets one to three times daily; Children's dosage, when recommended by a physician: 10 to 14 years, one tablet, one to three times daily; 5 to 10 years, one-half tablet, one to three times daily.

CONTRAINDICATIONS: Gastrointestinal ulceration and sensitivity to any of the components.

WARNINGS: Salicylates increase the effects of anticoagulants. Caution is necessary when salicylates and anticoagulants are prescribed concurrently. Also, salicylates may depress the concentration of prothrombin in the plasma. Large doses of salicylates may affect insulin requirements of diabetics. Salicylates may potentiate sulfonylurea hypoglycemic agents. Analgesic abuse (excessive and prolonged therapy) has been associated with nephropathy. TO AVOID

ACCIDENTAL POISONING ACETYLSALICYLIC ACID PREPARATIONS MUST BE KEPT WELL OUT OF REACH OF CHILDREN.

PRECAUTIONS: Give with caution to patients with asthma, other allergic conditions, bleeding tendencies, or hypoprothrombinemia. Salicylates can produce changes in thyroid function tests.

Observe care in use of codeine, although tolerance and addiction are rare. Give codeine with caution to patients with severe respiratory depression. Its depressant effect may be enhanced by concurrent administration of sedatives and tranquilizers.

ADVERSE REACTIONS: Acetylsalicylic acid: *Gastrointestinal:* dyspepsia, heartburn, nausea, vomiting, diarrhea, gastrointestinal ulceration and bleeding. *Ear reactions:* tinnitus, hearing loss. *Hematologic:* anemia, leukopenia, thrombocytopenia, purpura. *Dermatologic and Hypersensitivity:* urticaria, angioedema, pruritus, various skin eruptions, asthma and anaphylaxis. *Miscellaneous:* mental confusion, drowsiness, sweating and thirst.

Codeine: Average or large doses may cause various gastrointestinal symptoms such as nausea, vomiting and constipation.

Caffeine: May cause nausea, nervousness, insomnia, headache, vomiting, palpitation, vertigo, muscle tremor, sensory disturbances, excessive diuresis in sensitive patients. Large doses may cause gastric ulceration.

FULL INFORMATION AVAILABLE ON REQUEST

HOW SUPPLIED

222* Tablets — White, scored, engraved 222 on one side. Each tablet contains: acetylsalicylic acid 375 mg, caffeine citrate 30 mg, codeine phosphate 8 mg. Available in tubes of 12; bottles of 40 and 100; also bottles of 60 with safety cap.

*Trademark



(MC-390a)

Frosst

FOUNDED IN CANADA IN 1899
CHARLES E. FROSST & CO.
KIRKLAND (MONTREAL) CANADA

LE VOLONTARIAT DE LA COTISATION

Les mots volontariat ou bénévolat trouvent de moins en moins de place dans une société qui pense de plus en plus en termes de rentabilité.

En autant que les cōtisations à l'Association Dentaire Canadienne et à l'Association des Chirugiens-Dentistes du Québec sont concernées, il s'agit de volontariat parce que ces organismes n'ont pas le droit strict de les exiger.

Le volontariat de ces cōtisations sous-entend néanmoins que les dentistes ont un sens de responsabilité pour permettre une saine conduite des affaires dentaires. Le volontariat suppose aussi un sens de l'honneur et de coopération individuelle par lesquelles on ne rejette pas sur le dos du voisin un fardeau financier et à plus forte raison lorsque ces organismes travaillent au bien commun.

A ce sujet, le Dr Claude Chicoine, directeur général de l'Association des Chirugiens-Dentistes du Québec et le Dr Clyde Covit, président du conseil d'administration de l'Association des Chirugiens-Dentistes du Québec écrivaient: "L'Association est plus active que jamais et lance maintenant 'l'opération santé', qui symbolise ses priorités pour l'année 1977, telles que déterminées par son Conseil d'administration.

OPERATION SANTE orientera nos efforts vers les points suivants:

1. L'information
2. Le recrutement
3. L'opération santé:
 - urgences
 - accessibilité
 - disponibilité
4. Les négociations:
 - le régime des soins dentaire
 - les assistés sociaux
5. L'Office des professions
6. Les mesures anti-inflationnistes
7. Les tierces parties
8. Les services aux membres

Toutefois, nous réalisons de plus en plus que nos objectifs et nos préoccupations sont en grande partie similaires à ceux de nos confrères des autres

provinces et il nous apparaît évident qu'en agissant de concert avec les autres associations provinciales, par le biais de l'Association dentaire canadienne, nous pouvons profiter des avantages d'un front commun très efficace.

L'A.C.D.Q. a déjà franchi une étape en ce sens en devenant cette année le représentant accrédité de la province auprès de L'A.D.C. et pourra désormais se faire entendre au niveau fédéral et exprimer les vues des dentistes du Québec.

Les objectifs de l'Association dentaire canadienne sont essentiellement les mêmes que les nôtres mais en fonction de tous les dentistes du pays. Il est donc impérieux que nos aspirations soient connues de nos représentants nationaux au même titre que celles de nos confrères des autres provinces, de tous sur des sujets d'intérêt commun pour toutes les provinces tels que:

1. Les législations anti-inflationnistes
2. La loi relative aux enquêtes sur les coalitions
3. Les régimes de soins dentaires (en assistant et en coordonnant les activités des associations provinciales)
4. Les assistés sociaux
5. Le personnel auxiliaire
6. Les tierces parties
7. Les tarifs douaniers (excise taxes)
8. La supervision des investissements et des assurances
9. Les relations publiques

Au même titre que L'A.C.D.Q., mais à un palier différent l'A.C.D.Q. a donc un rôle très important à jouer pour notre Association, l'adhésion à l'A.D.C. est *volontaire*, ce qui nous amène à vous demander d'accorder votre appui à notre association nationale. Nous n'agissons pas ici par pur altruisme mais en fonction du fait que notre représentation à l'A.D.C. sera proportionnelle au nombre d'adhérents du Québec.

Nous avons absolument besoin de votre support: pour 1,250 membres du Québec, nous pourrions déléguer trois représentants au Bureau des gouverneurs de l'A.D.C., ce qui nous per-

mettra de participer efficacement aux décisions prises au niveau national.

Grâce à sa nouvelle constitution, l'Association dentaire canadienne s'est réorientée et s'est donné les moyens de remplir pleinement son rôle. C'est pour lui permettre de mener à bon terme des projets qui affecteront éventuellement votre pratique quotidienne et votre niveau de vie que nous vous demandons de répondre favorablement à l'offre d'adhésion que vous recevrez sous peu.

Evitons les surprises désagréables et agissons dès maintenant. Pour le bien de notre profession et des dentistes du Québec, donnons la chance à l'Association dentaire canadienne de travailler pour nous."

Au moment où ces lignes sont lues, les confrères n'ont peut-être pas encore tous envoyé leurs cōtisations. Bien sûr, il est encore temps.

Dr Robert Lambert

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 31 janvier 1977:

<i>Fonds d'actions</i>	
ordinaires	27.757
<i>Fonds à revenu fixe</i>	18.849
<i>Fonds avec garantie</i>	13.349

L'avoir total (valeur marchande) du régime se montait à \$23,959,477.63.

Pour de plus amples renseignements, veuillez écrire à CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ont. M5R 2P2.

ERRATUM

Nous prions les membres de la Société Canadienne des Chirugiens Buccaux d'accepter nos excuses. Dans la publication de décembre 1976, une erreur s'est glissée dans la traduction du nom de cette société. Merci au Dr. Guy Maranda de nous l'avoir signalé.

UN NOUVEAU CONCEPT POUR TOUS LES DENTISTES

DEUXIÈME CONGRÈS CANADIEN DE DENTISTERIE PÉDIATRIQUE

Les 20-22 mai, 1977 — Hôtel Reine Elizabeth
Montréal, Québec

Avec la participation de:

Dr. Arto Demirjian "Le développement des dents"
Dr. Michel Bonin — Dr. Sheldon Dorfman "L'orthodontie chez l'enfant"
Dr. Richard Silbert "Traitement endodontique de la dent permanente jeune"
Dr. Marcel Dion "Malformations congénitales de la bouche"
Dr. Lionel Cudzinowski "Urgence dentaire chez l'enfant"
Dr. André LaRochelle "Développement des malocclusions"
Dr. Robert Langlais "Diagnostic buccal et radiologie"
Mme Claire Gélinas Chebat "Le bégaiement son traitement par rétroaction"
Dr. Huan Pham "Chirurgie dentaire pour enfants"

Table ronde: "L'Avenir de la Dentisterie pour Enfants"
— et d'autres

PRESENTATIONS CLINIQUES et SCIENTIFIQUE — EXHIBITS

Renseignements: Dr. David Kozloff, 3333 Queen Mary Rd. #490, Montréal, Que. H3V 1A2

AN EXCITING CONCEPT FOR THE SPECIALIST AND PROGRESSIVE GENERAL PRACTITIONER OF DENTISTRY FOR CHILDREN

THE SECOND CANADIAN CONGRESS OF DENTISTRY FOR CHILDREN

May 20-22, 1977 — Queen Elizabeth Hotel
Montreal, Quebec

Featuring:

Dr. Basil Bibby "Caries Research"
Dr. Norman Levine "The Handicapped Child"
Dr. Robert Rapp "Nursing Bottle Syndrome"
Dr. Gerry Wright "Child Abuse in the Dental Office"
Dr. Maret Truuvert "Nutrition and Diet Education for Infants and Young Children"
Dr. Martin Curzon "Trace Elements and Dental Caries"
Dr. Howard Stein "Prevention of Malocclusions"
Dr. Melvyn Kay "Periodontal Disease in Children and Adolescents"
Dr. Richard Kramer "A Child's First Visit for Restorative Treatment"
Dr. Tom Dobbs "Maximum Auxiliary Utilization in Children's Dentistry"

Panel discussion: "The Future of Dentistry for Children"
— and much more

CLINICAL and SCIENTIFIC SEMINARS — FELLOWSHIP — COMMERCIAL EXHIBITS

For information write: Dr. David Kozloff, 3333 Queen Mary Rd. #490, Montreal, Que. H3V 1A2

OCCLUSAL ADJUSTMENT IN ORTHOGNATHIC SURGERY: THE TEAM APPROACH

R. Harper, D.D.S.
P. T. Smylski, DDS, FRCD(C)
Toronto

The stability of various orthognathic surgical procedures is affected by a number of factors. This paper deals with the role of occlusal harmony as a major contributing factor and describes a basic approach to preoperative, intraoperative, and postoperative occlusal adjustment.

Maximum intercuspation with an absence of premature contacts along the arc of closure is the primary objective of occlusal equilibration. The uniqueness in orthognathic surgery lies in the fact that a new envelope of motion is established for the patient. However, every effort should be made to achieve a normal relation of the condylar head to the fossa. After healing is complete, with proximal and distal fragments reunited in this new position, the occlusion must be compatible with temporomandibular joint function in this newly established envelope of motion (Fig. 1).

The forces created by the movements of the mandible during mastication and throughout the various envelopes of motion to maximum intercuspation, can be defined in terms of vectors. A vector is a term used to define the magnitude and direction of a force, and is illustrated as an arrow. The direction of the arrowhead signifies the direction of the force and the length of the arrow relates to the magnitude of the force.

For purposes of description, orthognathic surgical procedures can be divided into the following categories:

- A. Mandibular osteotomies involving an anterior vector component, e.g. advancement of a retrognathic mandible, correction of apertognathia (open bite).
- B. Mandibular osteotomies involving a posterior vector component, e.g. reduction of a prognathic mandible, segmental osteotomies with posterior displacement.
- C. Maxillary procedures with an anterior vector component, e.g. Le Fort I, II, III, osteotomies to advance the maxilla or midface.
- D. Maxillary procedures with a posterior vector component, e.g. anterior segmental osteotomies.

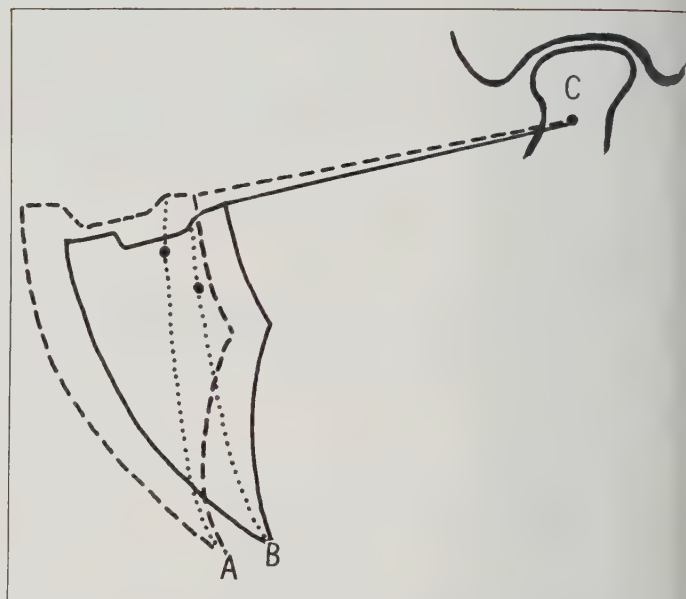
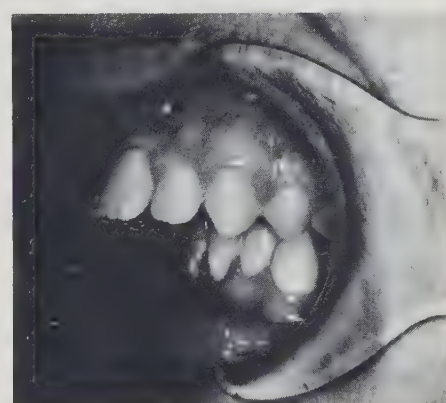
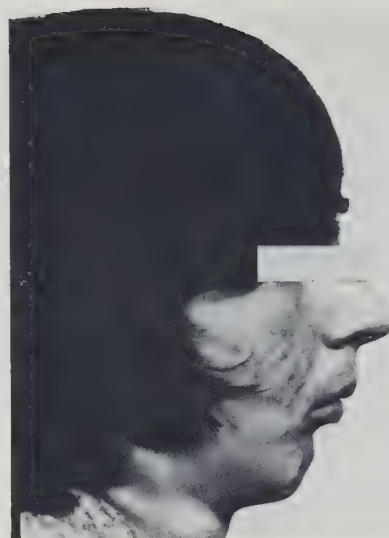
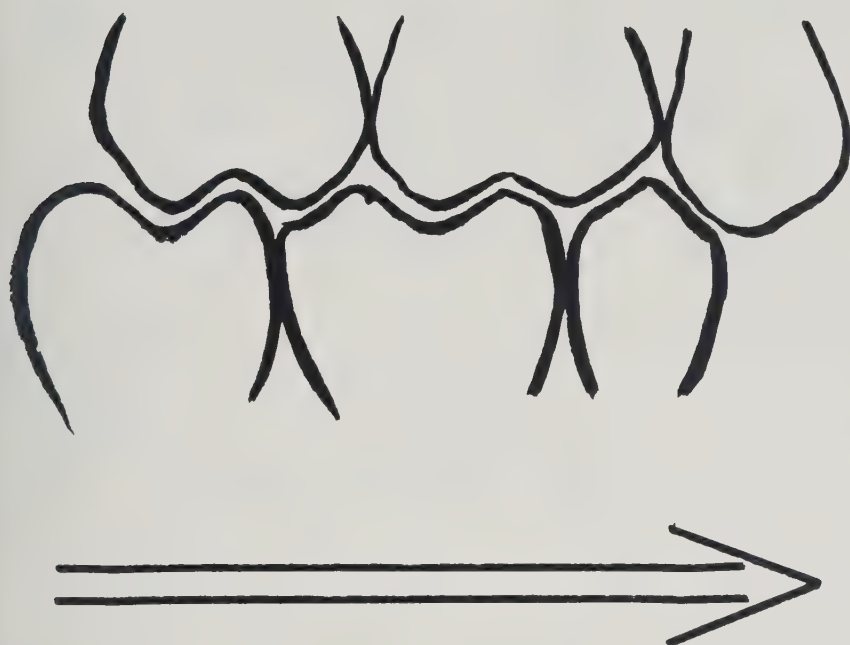


Fig 1 (a) The envelope of motion as described by a patient with a prognathic mandible. (b) The envelope of motion as described by the same patient after prognathic reduction. (c) The position of the condylar head as it relates to the fossa should not change from its presurgical position.

A. Mandibular osteotomies involving an anterior vector component

The movement of a retrognathic mandible into an anterior position naturally causes stretching of skin, muscle and connective tissues, including periosteum. Often the digastric muscle is stripped with the periosteum to minimize the posterior elastic pull on the mandible. The stylomandibular ligament is also stripped. By the end of the fixation period of about 8-10 weeks these tissues have re-attached in new functional positions. The primary objective of occlusal adjustment in these procedures is to eliminate interferences which may initiate posterior displacement through increased neuromuscular feedback or which may simply set up a physical posterior vector. Such interferences are most likely to occur on backward facing inclines of maxillary teeth and forward facing inclines of mandibular teeth (Fig. 2). Occlusal adjustment should begin with the static maxillary component.

(a)



(b)

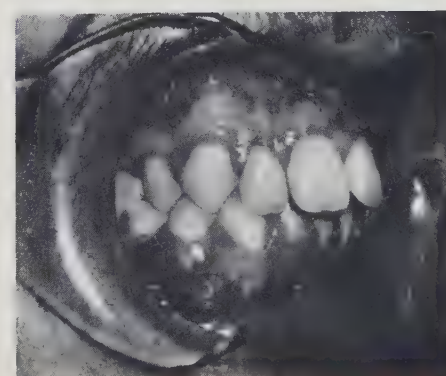
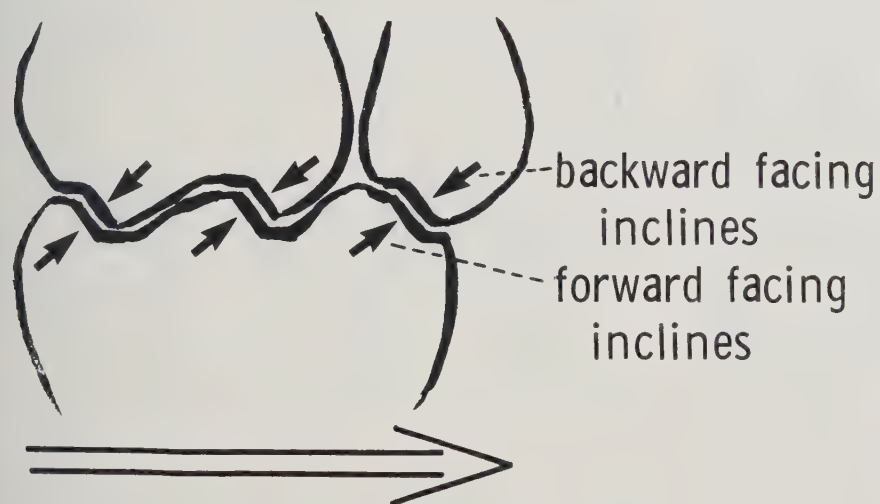


Fig 2 (a) Preoperative occlusion and photograph of a patient with a retrognathic mandible and Angle Class II occlusion. (b) Postoperative photograph and occlusal adjustment necessary to eliminate posterior slide and achieve maximum intercuspation. Note the grinding of backward facing inclines of upper teeth and forward facing inclines of lower teeth. Cusp height is not diminished.

Premature contacts in these procedures which cause a right or left lateral shift of the mandible from retruded contact to acquired contact must also be treated (Fig. 3). Left shifts are caused by left facing inclines of maxillary teeth and right facing inclines of mandibular teeth. Right shifts are caused by right facing inclines of maxillary teeth and left facing inclines of mandibular teeth.

As the retrognathic mandible is advanced surgically, a narrower maxillary arch must accommodate a broader arch width of mandibular teeth. Therefore, interferences to maximum intercuspation are most likely to occur on inward facing inclines of maxillary teeth and outward facing inclines of mandibular teeth (Fig. 4).

B. Mandibular osteotomies involving a backward vector component

The medial pterygoid is the muscle that is stretched in posterior displacement of the mandible, and this is usually partially stripped to allow for re-attachment in a new functional position. Compression of tissues, especially the tongue, has to be considered as a factor providing an anterior vector. However, in most cases the tongue seems to accommodate to the new posterior position.

The main objective of occlusal adjustment in this group of procedures is to eliminate interferences which may cause an anterior displacement of the mandible. These interferences are most likely to occur on forward facing inclines of maxillary teeth and on backward facing inclines of mandibular teeth (Fig. 5).

Right and left displacement of the mandible during centric slide, in these procedures, tend to follow the same pattern as described for right and left displacement in mandibular advancement procedures.

Prognathic reduction generally involves moving the mandibular dental arch into relationship with a somewhat wider maxillary dental arch. Therefore, interferences are most likely to occur on outward facing inclines of maxillary teeth and inward facing inclines of mandibular teeth (Fig. 6).

C. Maxillary procedures with an anterior vector component

Occlusal adjustment for osteotomies involving a forward movement of the maxilla follow the same pattern as for occlusal adjustment of osteotomies involving posterior movement of the mandible.

D. Maxillary procedure with a posterior vector component

Occlusal adjustment in these procedures employs the same approach as for osteotomies involving a forward movement of the mandible.

Skeletal abnormalities of the jaws are usually associated with dental malocclusion. Often anterior teeth do not occlude and are left with large mamelons due to lack of wear. Also, anterior teeth may be slightly crowded or rotated, but not enough to warrant orthodontic adjustment. In these cases, a judicious approach to the esthetic adjustment of anterior teeth is indicated. Careful adjustment of

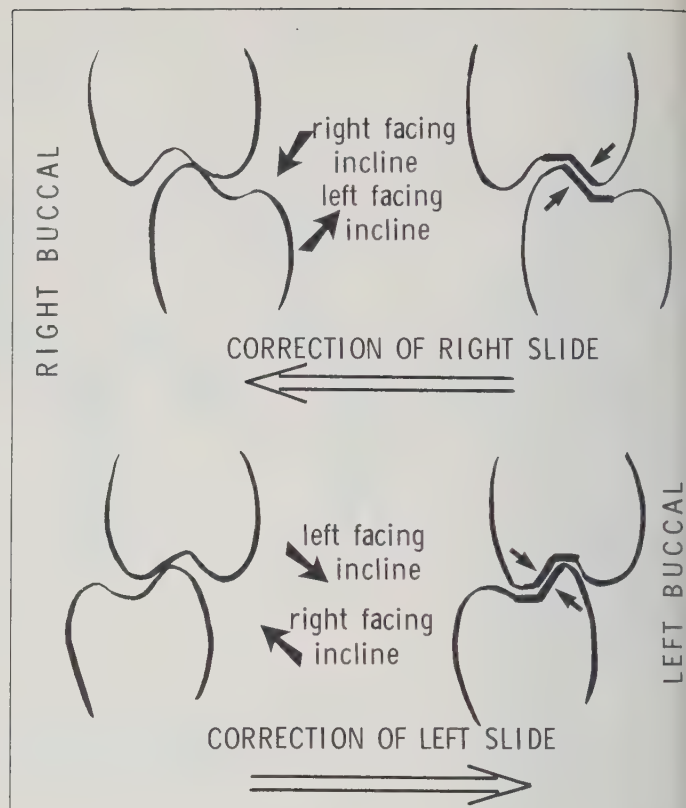
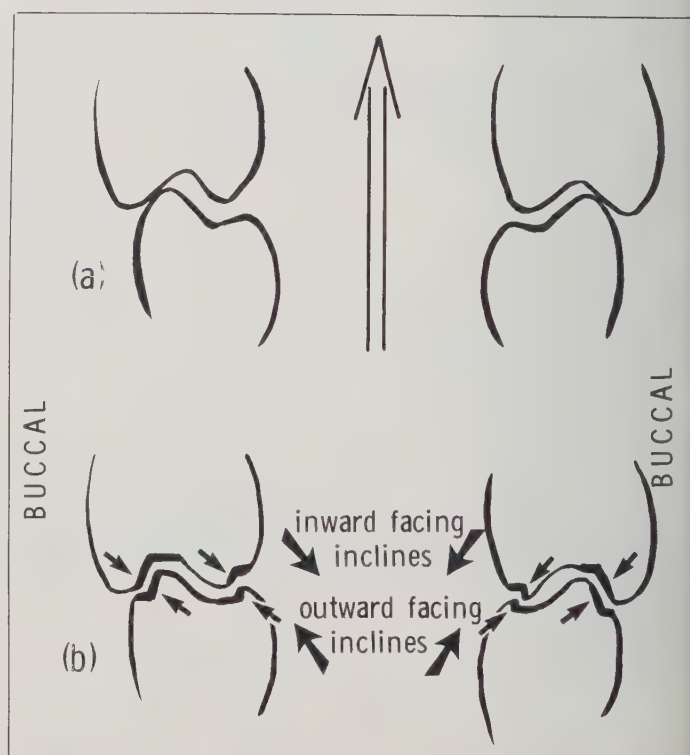
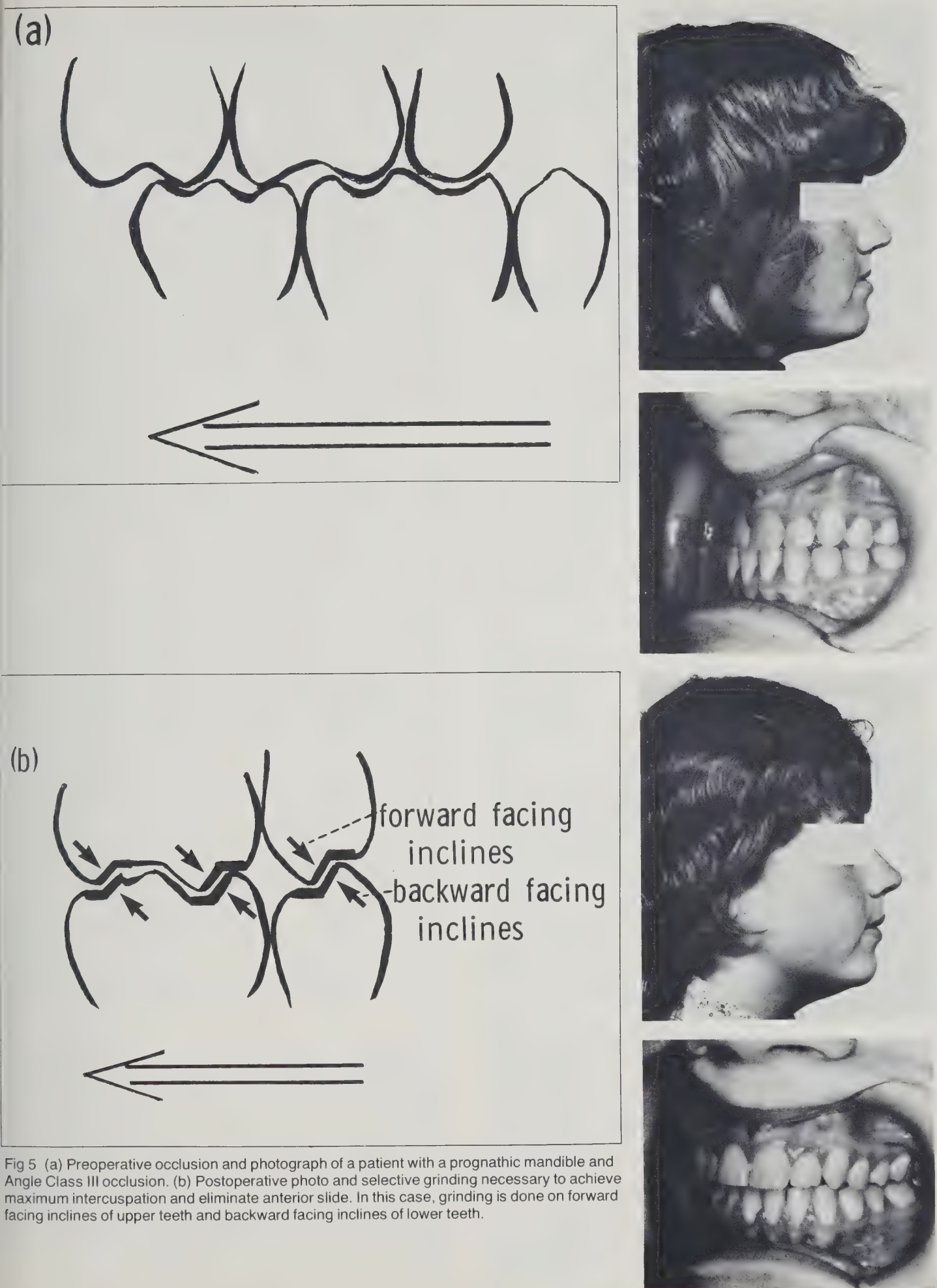


Fig 3 Correction of interferences causing right or left lateral shift.

Fig 4 Advancement of retrognathic mandible. Interferences to maximum intercuspation are most likely on inward facing inclines of upper teeth and outward facing inclines of lower teeth. (a) Before grinding. (b) After grinding.





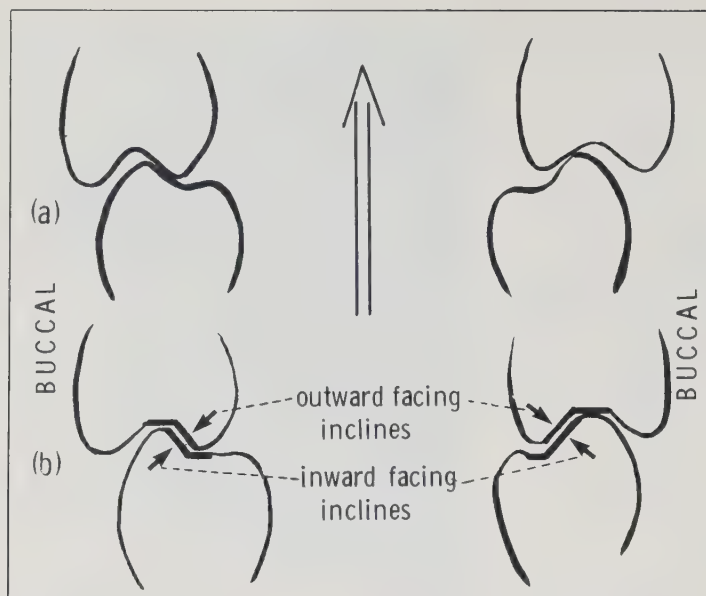


Fig 6 Reduction of prognathic mandible. Interferences to maximum intercuspation are most likely to occur on outward facing inclines of upper teeth and inward facing inclines of lower teeth. (a) Before grinding. (b) After grinding.

incisor morphology can often augment the pleasing facial appearance resulting from the surgical procedure. The incisal edges of anterior teeth can be ground smooth — with care not to impinge on overbite. Rough or irregular edges can also be recontoured for maximum esthetic effect. Rotated teeth can also be adjusted by selective grinding to appear less conspicuous.

Discussion

Premature contacts due to malposition of teeth or tooth guidance patterns can produce traumatic disturbances causing damage to teeth and supporting structures. During hinge closure, the mandible moves to effect the occlusion of the teeth, maintaining condylar centricity until first contact, when mandibular displacement may occur. As long as the guiding inclines and centric stops of the occlusal and incisal surfaces of the teeth are in proper relation to the arcs of closure as established by the TMJ and the muscles of mastication, the forces applied to the teeth will contribute to a healthy periodontium. However, when any component of the system is out of balance, the forces applied to the dental structures will be damaging to the periodontium and the TMJ. Temporomandibular joint dysfunction and pain may also occur in these patients.¹

Motor impulses which initiate occlusal movements can be modified by proprioceptor responses to premature contacts.^{2,3} Even where the jaw relationship is normal, with no compensatory muscle activity required for mastication and deglutition, asynchronous contraction patterns of the masticatory muscles can occur.⁴ These motor responses adapt to alter the degree of tonal contraction, and usually the alteration tends toward a hypertonic response. This hypertonicity causes exacerbation of the occlusal abnormalities, injury to the periodontium, pain and trismus. TMJ dysfunction and failure of an otherwise stable surgical procedure are the consequences. However, centric coinci-

dence with an absence of premature contacts can only serve to enhance the stability of the final surgical result.

Posselt⁵ described an envelope of motion which relates mandibular movement with occlusion and TMJ function. Orthognathic surgery causes an alteration of one or a number of the components of this system. Therefore, each component must be evaluated relative to the whole system. Functional analysis in terms of envelope of motion studies should be done to assess long-term postsurgical stability. These studies serve to complement the conventional cephalometric analysis.

Selective occlusal adjustment can be done in three stages for the surgical patient. The preoperative study model can give an indication as to the magnitude of the occlusal discrepancy. At this time a decision can be made as to the need for some major or minor orthodontic tooth movement. However, if the disharmony is only slight, selective grinding can be done by extrapolating from the models to the predicted areas of interference in the mouth. The second stage of occlusal adjustment is done during the operation. At this time it may be necessary to refine certain areas in order to achieve maximum intercuspation. The final phase of adjustment should begin shortly after removing the intermaxillary wires, and the patient should be checked for several weeks thereafter. This is the critical stage with respect to retraining old muscle patterns, and it is at this point that the patient is most susceptible to occlusal discrepancies and consequent sequelae, including partial relapse.

The team approach to orthognathic surgery clearly provides optimum benefits to the patient and contributes to a more favourable long-term prognosis. The role of the orthodontist in preoperative and postoperative occlusal guidance has been established. Preoperative alignment of teeth in harmony with basal bone, correction of rotations and adjustment of occlusal plane, will allow maximum surgical movement of basal bone. In some cases, preoperative orthodontic movement may appear to augment the dysplasia. However, the final surgical result will be functionally more stable and esthetically more pleasing.

The prosthodontist should also contribute in cases where splinting of edentulous or partially edentulous fragments is a factor. The planning of the final prosthesis and the occlusal management will involve prosthodontic consultation.

The oral health of the patient at the time of surgery must be impeccable, and in this regard the periodontist, pedodontist and the family dentist play a key role. The long-term management of the occlusion is also in the hands of this group.

In the surgical manipulation of the basal bones, the oral surgeon uses his knowledge of occlusion in order to achieve maximum occlusal stability. Intraoperative occlusal adjustment can help to control any tendency to slip during the fixation period.

In conclusion, oral surgery has become very much a team effort with each member participating at various phases of



the treatment. Occlusion is the common denominator of this team and a clear understanding of a basic approach to occlusal adjustment can effect a better long-term functional prognosis for the patient as well as the optimum esthetic result.

The authors wish to acknowledge the advice of Dr. E. Rajack in his critical review of this paper.

Dr. Harper is a graduate student in oral surgery at the University of Toronto. Dr. Smylski is professor and chairman, Department of Oral Surgery, Faculty of Dentistry, University of Toronto.

Reprint requests to Dr. Smylski, Department of Oral Surgery, Faculty of Dentistry, 124 Edward St., Toronto, Ont. M5G 1G6.

- 1 Schwartz, L., Moulton, R. E. and Goldensohn, E. S. Pain involving the temporomandibular articulation. Temporo-mandibular joint pain dysfunction syndrome. Dent Clin N Amer July 1959, p.515.
- 2 Zarg, G. A. and Thompson, G. N. Assessment of clinical treatment of patients with TMJ dysfunction. J Prosth Dent 24:542, 1970.
- 3 Moyers, R. F. Some physiologic considerations of centric and other jaw relations. J Prosth Dent 6:183, 1956.
- 4 Rafjord, S. P. Bruxism, a clinical and electromyographic study. J Amer Dent Ass 66:21, 1961.
- 5 Posselt, U. The physiology of occlusion and rehabilitation. Philadelphia, F. A. Davis Co., 1962.

CANADIAN DRUG IDENTIFICATION CODE BOOK

FOURTH EDITION

NOW AVAILABLE

The Code Book lists over 16,000 Canadian drug products. Includes manufacturers, medicinal ingredients, dosage forms, routes, packaging, and cross-references to identical medicinal formulations.

FOR A FREE COPY COMPLETE THIS FORM AND MAIL TO:

DRUG INFORMATION DIVISION
DRUGS DIRECTORATE
HEALTH & WELFARE CANADA
355 River Road
Vanier, Ontario K1A 1B8

NAME

STREET ADDRESS

CITY

PROVINCE

POSTAL CODE

DENTAL LIBRARY
124 EDWARD ST.
TORONTO 2

KARIDIUM



For the individual
systemic control
of dental caries

Literature, dosage sheet on request.

PROFESSIONAL PHARMACEUTICAL CORP.
2795 BATES ROAD, MONTREAL 251, QUEBEC • (514) 739-3633

IMMEDIATE DENTURE IMPRESSION TECHNIQUE USING ZINC-OXIDE AND EUGENOL AND RUBBER BASE IMPRESSION MATERIAL

Shaukat A. Chaney, BDS, MSD
Saskatoon

This article presents a brief review of various impression techniques for immediate dentures. An impression method combining zinc-oxide and eugenol paste and rubber base impression material is illustrated.

Over the years many immediate denture impression techniques have been advocated. A brief review of the literature indicates that Hardy,¹ in 1935 described a sectional impression technique using impression compound. In 1936, Striker² made his impressions using reversible hydrocolloid impression material in a shellach tray. Swenson,³ in 1939, improvised Hardy's technique by lining the sectional impression compound with zinc-oxide and eugenol. Sommers,⁴ in 1950, advocated the use of a vulcanized tray which, after border moulding with modelling compound, was filled with irreversible hydrocolloid impression material to make the impression. Hughes,⁵ in 1951, used zinc-oxide and eugenol to record the posterior edentulous area. He then loaded a perforated tray with irreversible hydrocolloid and completely covered the previously seated zinc-oxide and eugenol impression and the anterior dentulous area to obtain a one-piece impression of posterior zinc-oxide eugenol and anterior irreversible hydrocolloid. In 1957, Freese⁶ advocated the use of mercaptan rubber base impression material.

The technique advocated in this article combines the superior ability of zinc-oxide and eugenol paste to record the soft tissues accurately and the elastic properties of the mercaptan rubber base impression material. These materials are used to obtain a one-piece impression which is correctly extended in the anterior and posterior regions.

Method

The posterior teeth are extracted maintaining a bicuspid as a vertical stop. The wounds are allowed to heal for three weeks before the impression is made.



Fig 1 Custom impression tray.

A primary impression is made using irreversible hydrocolloid, and poured to obtain a primary cast.

Quick cure acrylic resin is used to construct a custom tray. The tray is extended into the buccal and labial vestibule. The teeth are not covered by the tray but are allowed to protrude through an opening. The acrylic is then adapted into the buccal and labial vestibular areas and the excess material trimmed away (Fig 1).

After the material is set, the tray is examined in the mouth for any interferences during insertion and removal and between the edge of the opening and the teeth. The tray is then border-moulded using low fusing green stick compound (Fig 2).

The tray is then loaded with zinc-oxide and eugenol paste and placed in the mouth. After the material sets, the excess impression material is carefully removed from the teeth. A

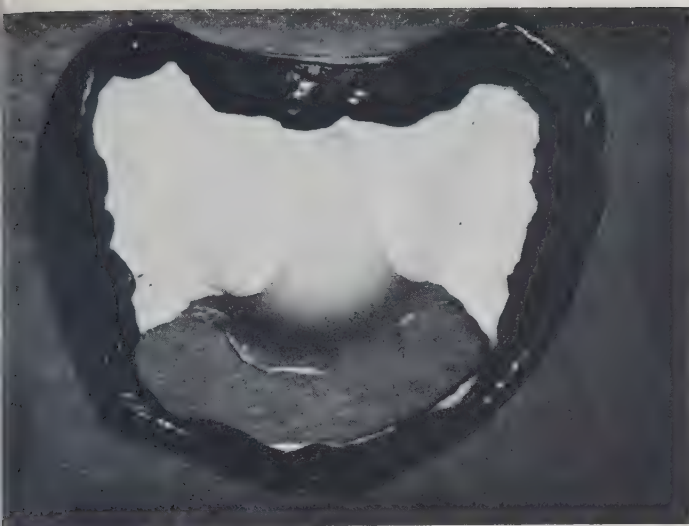


Fig 2 Tray border moulded.



Fig 3 Final impression using zinc-oxide eugenol.

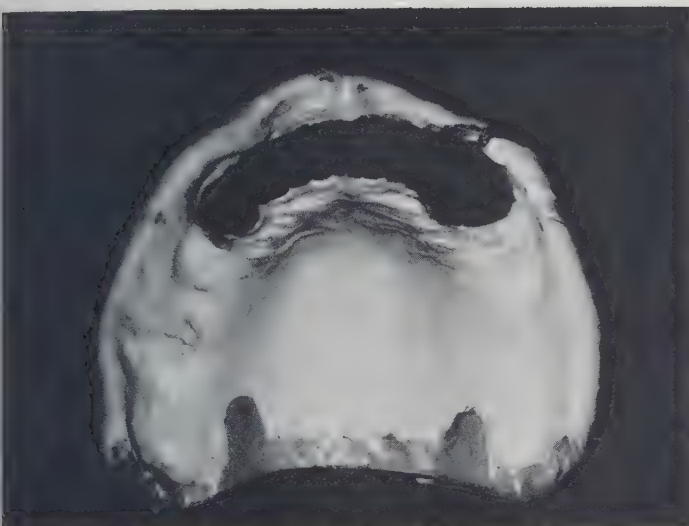


Fig 4 Injecting heavy-body rubber base material.

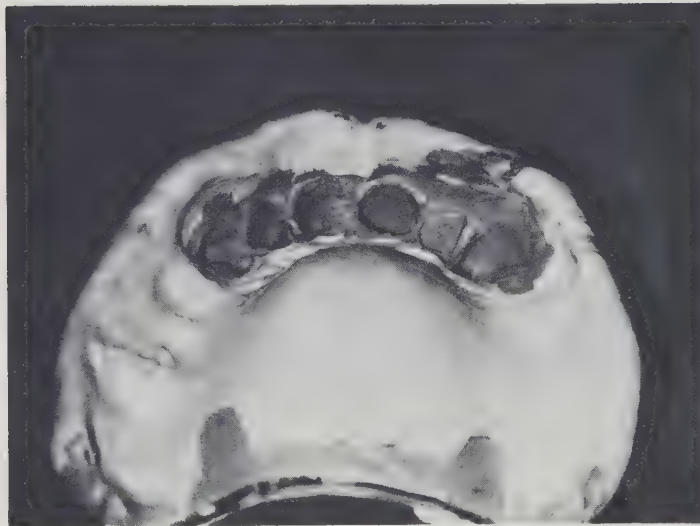


Fig 5 Zinc-oxide and eugenol rubber base impression.

posterior palatal seal is created using mouth-temperature softening wax (Fig 3).

Mercaptan rubber base adhesive is then applied on the external surface around the opening for the teeth, and the tray with the zinc-oxide and eugenol impression is resealed in the mouth.

Heavy-body mercaptan rubber base impression material is then mixed and loaded into a syringe. The rubber base is injected on and around the teeth, covering the area around the opening on which the adhesive is applied (Fig 4). The rubber base should be injected in excess, to enable the impression to be removed without tearing the material.

The mercaptan rubber base impression material is allowed to set for eight minutes and the zinc-oxide and eugenol and the rubber base impression is removed in one piece (Fig 5). The impression is then boxed and the cast is poured.

This article was taken from a thesis by the author in partial fulfilment of the requirements for the MSD degree, University of Minnesota, June 1975.

Dr. Chaney is assistant professor of removable prosthodontics, University of Saskatchewan.

- 1 Hardy, I. R. Immediate maxillary dentures. *Dent Dig* 41:50, 1935.
- 2 Striker, A. G. Simplified immediate denture impression. *Dent Dig* 42:86, 1936.
- 3 Swenson, M. G. Immediate denture service. *J. Amer Dent Ass* 26:719, 1939.
- 4 Sommers, J. A technique for obtaining a good impression for an immediate full denture. *J Amer Dent Ass* 40:376, 1950.
- 5 Hughes, F. C. Transition from natural to prosthetic dentures. *J Prosth Dent* 1:145, 1951.
- 6 Freese, A. S. Simplified impressions for immediate complete dentures. *J Amer Dent Ass* 54:240, 1957.

Report of a case

A MONOSTOTIC FIBRO-OSSEOUS LESION OF THE MANDIBLE

J. R. Trott, MDS (Adel), FRACDS (Aus), FRCD(C)

P. Walton, DMD

C. Baker, DMD, MScD

Winnipeg, Man.

An unusual case of a monostotic fibro-osseous lesion of the mandible presenting as a well circumscribed radiolucency closely associated with a partially erupted third molar is described. A differential diagnosis of fibrous dysplasia, central giant cell reparative granuloma, and ossifying fibroma are considered. The histopathology in this case could suggest that these three conditions may well be a spectrum of the same disease entity and thus be hamartomatous in nature.

It would indeed be useful if every disease entity had an unmistakable hall-mark just as antique silver has, so that when the evidence in any single case is assembled one could say unequivocally what the disease is and thus establish its pathogenesis and prognosis. With a number of fibro-osseous lesions which afflict the jaws, this is, on occasion a hazardous procedure, as one is in all probability dealing with a spectrum of clinical and histological lesions, the basic pathogenesis of which is really not known. The following case illustrates the clinical, radiological and histological dilemma which can sometimes occur.

Case report

A 22 year old caucasian female was referred to the Department of Oral Surgery, University of Manitoba, by her family dentist for investigation of a swelling in the right mandible. The swelling had been present and painless for several years, but an intermittent dull pain had been present for several weeks. The patient's dentist had treated a right lower first molar with a sedative restoration prior to the patient being referred.

The patient's medical and dental histories were non-contributory, except for the extraction of the right second mandibular molar with local anaesthetic approximately five years previously.

Physical examination revealed a healthy female patient with no extra-oral deformity and no changes to the fifth cranial nerve. There were no palpable lymph nodes in the neck and no extra-oral swelling was evident.

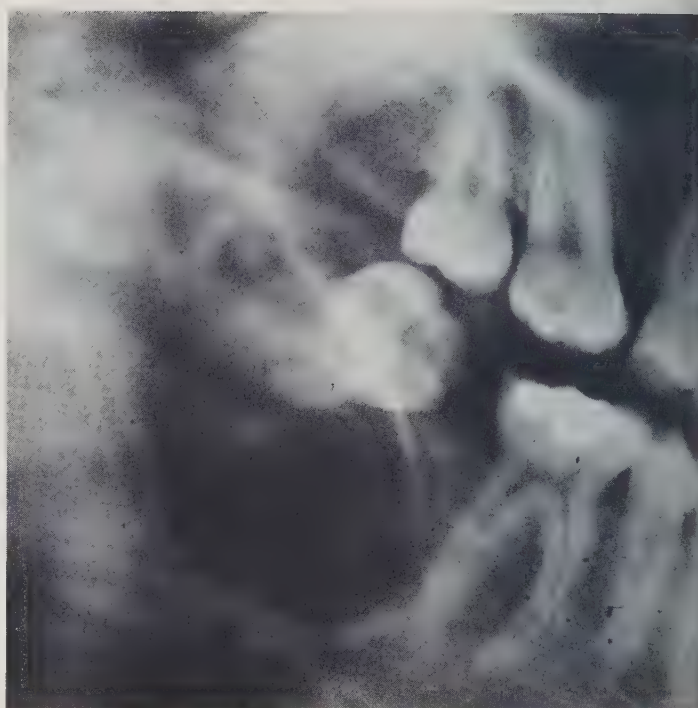


Fig 1 Part of a panorex x-ray of the jaws showing the radiolucency at the right angle of the mandible with its well defined corticated borders. The superior displacement of the roots of the impacted third molar and the inferior displacement of the inferior dental nerve can also be seen.

Complete blood count, urinalysis, serum calcium, phosphates and alkaline phosphatase, and chest x-ray were all within normal limits. A skeletal survey did not disclose any other radiolucent lesion. Intra-oral examination showed the right lower third molar partially erupted. A hard, bony, non-tender swelling of the buccal cortex extended from an area distal to the third molar, ascending into the ramus for approximately 1.0 cm. No changes in the lingual contour of the mandible were noted.

Radiographic examination revealed a large radiolucent lesion at the angle of the right mandible. The roots of the third molar had been deflected superiorly at the edge of the radiolucency (Fig 1). The border of the radiolucency was

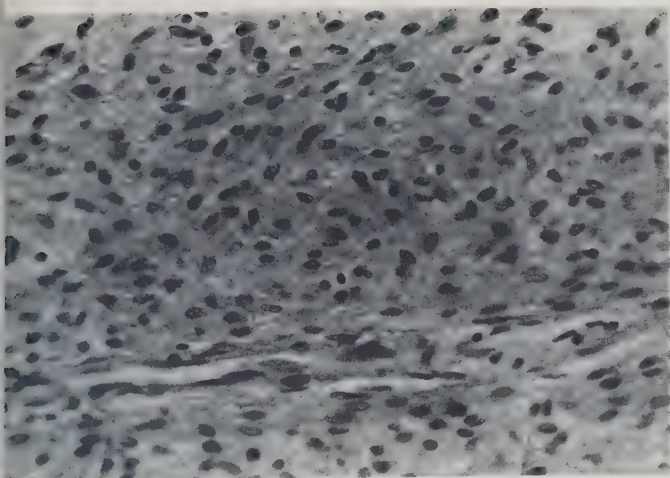


Fig 2 Photomicrograph showing plump fibroblasts and the irregular collagen matrix. Stain H&E. (Original magnification x 150).

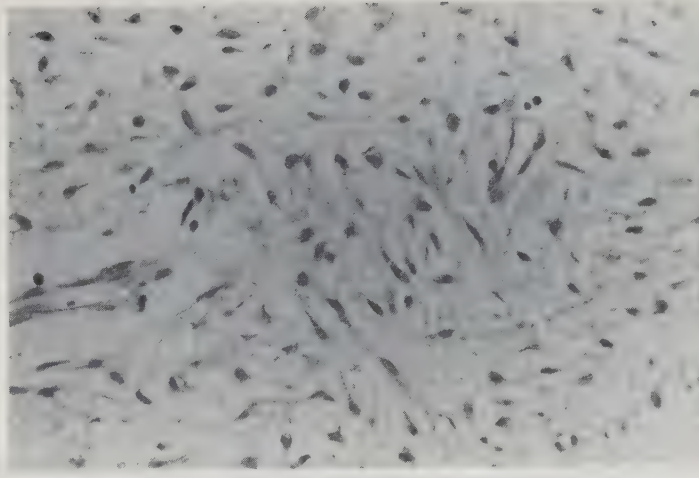


Fig 3 Photomicrograph showing the myxomatous type of tissue found in one lobe of the specimen. Stain H&E. (Original magnification x 150).

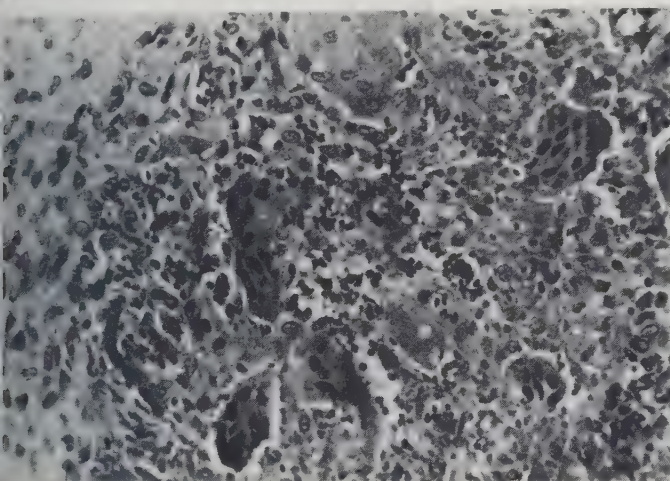


Fig 4 Photomicrograph showing a localized area of haemorrhage and irregular multinucleated giant cells. Stain H&E. (Original magnification x 150.)

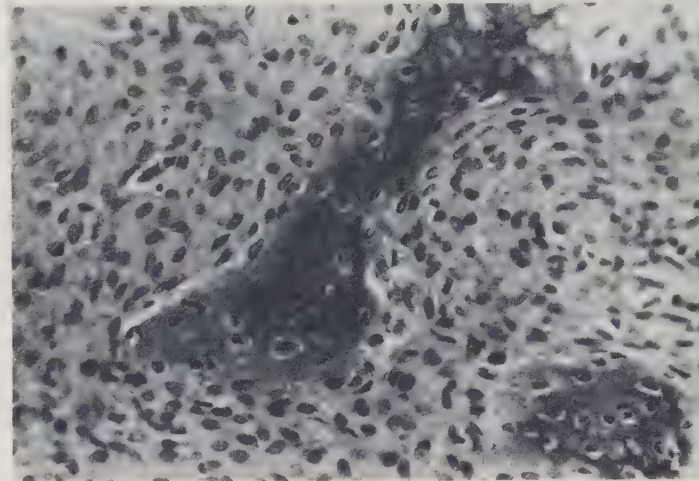


Fig 5 Photomicrograph showing small woven bone spicules with osteoid and lack of osteoblast rimming. Stain H&E. (Magnification x 150.)

well defined and in most aspects corticated. The inferior mental canal had been displaced inferiorly.

A number of diagnostic possibilities existed at this point, and it was decided to establish initially whether the radiolucency was a haemorrhagic or cystic lesion or whether it was filled with soft tissue. If the latter, the question then was whether it was a neoplastic lesion requiring extensive treatment or whether it was an hamartomatous lesion requiring localized removal.

Therefore, the patient returned at one week for a biopsy. Using 20 mg of I. V. valium and 4 cc of 2 per cent xylocaine with 1:100,000 epinephrine, a full-thickness muco-periosteal flap was raised, and with a carbide fissure bur, the buccal plate of bone was penetrated into the intra-osseous defect. Aspiration using a No. 18 gauge needle failed to produce any fluid contents and the bony opening was enlarged. The defect was seen to be filled with a soft pink tissue of which a small piece was removed and placed in 10 per cent formalin for histology. The wound was then irrigated and closed with 4-0 block silk sutures.

The biopsy showed that the lesion had fibromyxomatous tissue present and an initial diagnosis of fibrous dysplasia

was made even though no bone was seen originally.

Two weeks following initial biopsy, the patient was admitted to hospital for removal of the lesion under general anaesthesia, using N_2O/O_2 /halothane via a nasotracheal tube. A full thickness muco-periosteal flap was raised and access into the bony defect obtained with a Hall's air drill. The soft tissue separated easily and cleanly from the osseous walls. Using blunt dissection, the lesion was removed and placed in 10 per cent formalin. Closure was obtained using 3-0 plain gut sutures and the patient made an uneventful recovery.

The tissue was divided into two pieces each approximately $1.5 \times 1.0 \times 1.0$ cm and showed a highly cellular matrix of irregularly arranged plump fibroblasts, with a loose irregular collagen matrix (Fig 2). There were three other areas of interest in the specimen. One lobe of the section showed a far more myxomatous type of tissue than fibroblastic (Fig 3). There were also several focal areas of haemorrhage and associated multinucleated giant cells deep within the stroma and unrelated to the small amount of bone tissue which was present in one peripheral area (Fig 4). The bone spicules were small and irregular and consisted of

woven bone with osteoid but no clear osteoblastic rimming (Fig 5). In contrast to the total mass of the lesion the amount of bone present was fairly scant in nature.

Discussion

It is generally true when considering fibro-osseous lesions of the jaws, that one has to take into account the clinical, radiological, histological and sometimes biochemical evidence before making a definitive diagnosis. In this instance, one has to consider three major diagnoses: fibrous dysplasia, central giant cell granuloma, ossifying fibroma — or consider all these lesions as variations on a single theme.

The plump fibroblastic stroma, the woven bone, the osteoid formation and lack of osteoblast rimming would lead one to seriously consider a diagnosis of fibrous dysplasia as a first possibility. The patient would be in the right age group and females are affected about twice as commonly as males. Although such lesions are about half as common in the mandible as the maxilla, they do occur.¹ Panders² reviewed the radiographic evidence in 66 cases of fibrous dysplasia and found approximately 10 per cent were radiolucent. In this case, there was no fibrous tissue capsule nor did the patient have any evidence of Albright's disease, and the serum calcium and alkaline phosphatase levels were normal. Thus, a diagnosis of monostotic fibrous dysplasia would be reasonable.

A second possibility would be a central giant cell reparative granuloma, the basic structure of which is a fibroblastic stroma, usually with large numbers of multinucleated giant cells collected into fairly clearly defined foci. The focal collection of giant cells is closely associated with localized haemorrhage even though the giant cells rarely contain any haemosiderin pigment. It is also not unusual to observe limited amounts of new woven bone formation, usually associated with osteoblastic activity.³ Many of these features are present in this case. The radiographic appearance would also be consistent with such a diagnosis. Central giant cell granulomas occur twice as commonly in females as in males under the age of 30 and are most frequently found in the mandible but usually anterior to the first molars.⁴ Such lesions can also be slowly expansile without causing ulceration of the mucosa. Thus, there are a number of features, clinically, radiologically and histologically, which could support this diagnosis. It was felt however, that to sustain this diagnosis one might be expected to see many more focal areas of multinucleated giant cells than were present in this case. This, however, is a very subjective analysis and only shows how such lesions may well be "kissing cousins".

The third possibility is ossifying fibroma. As Lucas⁵ points out, the consistency of these lesions can be quite variable. At one end of the spectrum, the tissue can be principally fibroblastic in nature with the formation of some woven bone; in which case, it may be indistinguishable from a fibrous dysplasia. Radiologically, such lesions will

be radiolucent with a well defined border. Kramer³ suggests they may also have a well defined fibrous capsule, although this is not always true. Obviously at the other end of the spectrum, the radiograph may show a well demarcated radiopaque lesion which histologically shows considerable bone and cementoid formation, as well as mature connective tissue. However, this is not the situation either radiographically or histologically in this case. Nevertheless clinically the lesion was slowly expanding and radiographically was circumscribed. This particular diagnosis did not seem as appropriate to this lesion because of the lack of maturity of the collagenous matrix, the comparative paucity of bone and cementoid tissue, and perhaps the absence of a well defined capsule. Again, one has to admit the subjective nature of this judgement.

The situation becomes even more complicated when one considers the basic pathologies in these three diagnoses, where in each instance the aetiology is unknown. In each of the diagnoses the pathogenesis is speculative. Fibrous dysplasia is generally considered a dysplastic condition of bone, and since these lesions usually enlarge during the growth period and cease when growth stops, they may in a broad sense be considered hamartomatous in nature. The central giant cell granuloma frequently has the word "reparative" as a prefix, to indicate that it might be considered as an abnormal repair lesion in bone. However, there is a move away from this position mainly because one cannot answer the question "repair, following what injury?" Again the aetiology and pathogenesis are not known and since it is not now being regarded as a reparative lesion, might it not also be considered as a hamartoma?

Ossifying fibroma has the connotation and reputation of being a benign neoplasm of bone. Lucas⁵ questions this and suggests that it may be another manifestation of fibrous dysplasia, even though the pathological evidence is lacking to clinch this hypothesis, and thus he suggests it may be a developmental or hamartomatous lesion.

With the evidence found in this case, it is our contention that one should consider these three diagnoses as a spectrum of a single pathogenesis which at the moment eludes investigation.

The authors wish to thank Dr. C. C. Foster and Dr. D. Wedgwood of the Department of Stomatology, University of Manitoba, for their co-operation; and Miss Jill Emberley for the preparation of this manuscript.

Drs. Trott, Walton and Baker are with the Departments of Oral Biology and Stomatology, Faculty of Dentistry, Winnipeg, Man.

- 1 Eversole, L. R., Sabes, W. R. and Rovin, S. Fibrous dysplasia: a nosologic problem in the diagnosis of fibro-osseous lesions of the jaws. *J Oral Path* 1:189, 1972.
- 2 Panders, A. K. Clinical and radiographic aspects. *Trans Int Conf Oral Surg* 4:25, 1973.
- 3 Kramer, I. R. H. The histopathology of some central non-odontogenic tumours and tumour like conditions of the jaws. *Trans Int Conf Oral Surg* 4:28, 1973.
- 4 Gorlin, R. J. and Goldman, H. M. *Thoma's oral pathology*. Ed. 6. St. Louis, Mosby, 1970.
- 5 Lucas, R. B. *Pathology of tumours of the oral tissues*. Ed. 2. London, Churchill-Livingstone, 1972.

CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE.

Direct advertising copy to:
Marie Cosgrave, Classified Advertising Manager,
Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6,
Telephone: (613) 523-1770.

CLASSIFIED ADVERTISING RATES (Per Insertion Per Issue):

Minimum (50 words or less)	\$15.00
Each additional word	.30
Service charge for C.D.A. Box No.	2.00

DISPLAY CLASSIFIED ADVERTISING RATES: Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

OFFICES AND PRACTICES

BRITISH COLUMBIA — Burns Lake. Dentist wanted to practise in the Village of Burns Lake in northern British Columbia. Office space is available in a new Medical-Dental Building, constructed June 1976. There would be room for one or two dentists in the building. It is located directly across from the Hospital. The doctors, presently in the building, would be willing to provide anesthetic services for the dentists, either in the clinic or the hospital. This is an ideal opportunity for a young dentist in an expanding town, in one of the most beautiful recreational areas in British Columbia. Contact: Cotebe Management and Professional Services, P.O. box 167, Burns Lake, B.C. V0J 1E0.

BRITISH COLUMBIA — Kamloops. Space available in professional office building. 1250 sq. ft., presently occupied by two dentists and hygienist. Using 5 chairs. Willing to leave some equipment including x-rays. Apply to: #270 546 St. Paul St., Kamloops, B.C. Phone: (604) 372-5569.

BRITISH COLUMBIA — Vancouver. For sale: a well established city practice. Large separate private office, reception area and waiting room, with smaller lab and dark room. Excellent asking price. Present owner returning to postgraduate studies. Please reply to CDA Box Number 1668.

BRITISH COLUMBIA — Vancouver. Well established restorative and preventive dental practice in downtown Vancouver for sale. Patients are sincere and appreciative, demanding comprehensive type treatment. Good liaison established with other specialists in the building — lots of referred patients. Office suitable for one or two dentists; approximately 850 sq. ft. Four operatories with up to date equipment, fully equipped dental lab, dark room, reception area, waiting room, private office, storage room, and central high-volume suction. Present dentist returning to school. Contact: Dr. K. Lee, #529 925 West Georgia St., Vancouver, B.C. V6C 1R5. Phone: 684-9616.

BRITISH COLUMBIA — Vancouver. Well established general practice for sale downtown. Compact, efficient layout with lab, private office, modern equipment and built-in valtronic cabinets. Present owner on four day week, good net, reasonable overhead. Excellent professional building with many referring specialists. Reply to CDA Box Number 1669.

ALBERTA — Calgary. For Sale. Calgary practice with high gross. Three fully equipped operatories with modern equipment. Space for fourth operator. Reply to CDA Box Number 1662.

ALBERTA — Calgary. High gross general family practice on main artery. Five operatories with all the appropriate support rooms. Would also like to sell the small building the office is housed in. Very reasonably priced either way. Phone: (403) 278-1415 or write: Branitt Holdings Ltd., 239 Parkside Cres. S.E., Calgary, Alta. T2J 4J3.

ALBERTA — Hanna. Dentist required immediately for new Medical-Dental Clinic. Over 800 sq. ft. of working space available for rent or purchase. Combined receptionist and waiting room area. Population to be served, approximately 14,000. Apply to Box 700, Hanna, Alta.

ALBERTA — Red Deer. Rental space coming available adjacent to four-man dental group. Oral surgeon preferred and would be the only one in Central Alberta. Hospital privileges easily attainable in regional hospital. Panorograph and other services available if desired. Apply: Pro-Care Dental Services Ltd., 101 Medi-Dent House, Red Deer, Alta. Phone: (403) 347-2980.

MANITOBA — Lac du Bonnet District Health Centre. Full time dentist required. Ultra modern new practice location available. Three lounge chairs with modular custom cabinets, six stools, central suction, compressors, etc. X-ray with automatic film processor. Central sterilizer. Available for salaried dentist or negotiable arrangements. In March 1977. Please contact: Mrs. Beth Dyck, Executive Director, Lac du Bonnet District Health Centre, Box 1030, Lac du Bonnet, Man. R0E 1A0.

ONTARIO — Brampton. Dental office for rent. New Medical-Dental building conveniently located opposite the hospital. Will assist with partitioning. Phone: 451-5802 or 451-2024.

ONTARIO — Clifford. Opportunity for individual dentist in attractive, new Medical Centre at Clifford (75 miles northwest of Toronto). Equipment could be supplied if necessary. Practice would serve approximately 2500 people. Good school and recreational facilities. Apply to: Clifford and Community Medical Centre Board, Box 159, Clifford, Ont. N0G 1M0.

ONTARIO — Ottawa. Family practice for sale in professional building. Consists of 900 sq. ft. comprising two fully equipped operatories (including analgesia), laboratory, hygienist room, private office, reception room. Fully air-conditioned. Phone: (613) 731-5034 after 5:00 p.m.

ONTARIO — Ottawa Area. General practice in growing town, population 4,000. Three operatories — 2 fully equipped, technician on premises, rent \$270 monthly. Reply to CDA Box Number 1657.

ONTARIO — Pembroke. A graduate interested in taking over my practice for the summer of 1977: May 15-September 15 or any portion of the above. Terms to be arranged. Phone: (613) 735-6401 (home), or (613) 732-8522 (office).

ONTARIO — Toronto. Paedodontic practice for sale. Centrally located in an excellent professional building. Low capital investment. Present owner leaving Toronto. Practice available June 1977. Apply to: Dr. J. Kenny, 170 St. George St., Ste. 635, Toronto, Ont. M5R 2M8.

ONTARIO — Toronto. Office for lease in Ajax, consisting of reception room, business office, x-ray room, laboratory, three operatories with plumbing, leadlined walls, 600 sq. ft. Alternatively, the office could be fully equipped and the dentist could associate with a minimum salary plus bonuses, plus option to buy. Reply to: Dr. Hing, 440 Brown's Line, Ajax, Ont. Phone: 259-6597 or 244-8234.

ONTARIO — Weston. Dental office for rent. Consists of 2 operating rooms, laboratory and darkroom, reception area, waiting room and private office. All plumbing and electric wiring are present. Fluorescent lighting has been installed. Area approximately 500 sq. ft. Rent \$250 monthly. Contact: Dr. W. K. Cameron, 2315 Weston Rd., Weston, Ont.

ONTARIO — Windsor. Established office. Four operatories, small lab, dark room, waiting room. Center of a growing new area. Sale, Lease or Associate arrangement. Home (4 bedroom, modern) also available. Contact: P. J. Courey, 1490 Cabana Rd., Windsor, Ont. Phone: (519) 258-5912.

QUEBEC — Banlieue de Montréal. Bureau comprenant 2 salles opératoires toutes équipées à vendre (prix dérisoire). La clientèle remonte à plus de 75 ans de pratique. Réussite assurée au départ. (514) 773-9343 ou 772-5142.

QUEBEC — Montréal. Centre-nord, bureau de dentiste comprenant une salle opératoire équipée — 27 ans de pratique. A louer pour six mois avec possibilité d'achat de la propriété. Site idéal pour professionnel à 500' du métro dans bonne maison à revenus, facilement transformable en centre médical. (514) 845-6865.

QUEBEC — Montréal. (Ville Saint-Laurent). A louer. Centre dentaire. 2 locaux — 4 cliniques avec ou sans équipement — orthopantomographe. Téléphonez à 336-6464.

QUEBEC — Montréal (Ville Mont-Royal). A vendre — Pratique établie depuis vingt ans, deux salles opératoires, les dépenses minimes, les profits appréciables. Appelez 737-6737 ou 739-6019 ou écrivez Sonolo Management, 1339 Canora Rd., Ville Mont Royal, P.Q. H3P 2J5.

NEW YORK — Albany Area. General practice for sale. Brick home-office in growing suburb on corner lot. Three bedroom home with private backyard. Fully equipped 2 operator, three-year-old office. 1975 gross \$50,000. Cost \$85,000 firm. Owner joining V.A. for specialty training. Phone evenings: (518) 477-8919.

ASSOCIATESHIP AVAILABLE

BRITISH COLUMBIA — Fernie. Full-time associate required with option to buy in about a year. Contact: Dr. R. H. Campbell, Box 130, Fernie, B.C.

BRITISH COLUMBIA — Revelstoke. We are offering the opportunity for a young dentist to work with us in a non-traditional, cooperatively managed dental environment. The program is designed to help the associate learn communication skills and principles of effective practice management as well as advanced preventive and restorative techniques. Our group is located in an Alpine area and there is a great need for health improvement. Please call collect: (604) 837-5149 or write to: Evolution Management, Box 2118, Revelstoke, B.C.

BRITISH COLUMBIA (Northwest) — Terrace. Associate wanted with option to purchase, or someone to satellite practice from lower mainland. All expenses (air fare, etc.) paid. All equipment, staff, etc. provided on guaranteed income or percentage of fee basis. Three chairs, preventive four handed practice. Write: Dr. Talarico, 4546-10 Park Ave., Terrace, B.C. V8G 1V4.

ALBERTA — Calgary. Associate wanted for a busy modern practice in a high income community, 45 minutes from Calgary. Leasing will also be considered. Associate or lessee will have the option to purchase. Two (2) operatories with a third ready to be equipped. Immediate high income assured. Hospital privileges available. Reply to CDA Box Number 1661.

SASKATCHEWAN — Saskatoon. Full time Associate required in a busy high gross family practice. Two fully modern operatories available to associate in Five chair office. Possibility of purchase or partnership. Modern, air-conditioned Medical-Dental Building. Contact: Dr. R. E. Dickson, 621 Medical Arts Building, Saskatoon, Sask. S7K 3H3. Home phone: 653-3173.

ONTARIO — Cambridge. An opportunity for an associateship is available in a busy centrally located high gross practice. No investment necessary and initial percentage arrangement could become future group partnership for compatible individual. The practice is situated in a newly renovated six operator, 1800 sq. ft. office, which utilizes the open concept with Cox Systems units, Pelton and Crane chairman chairs, Ritter x-rays and an Orthopantomograph. It is a progressive prevention oriented practice encompassing all phases of general dentistry with particular emphasis on crown and bridge and endodontics. For further information please contact: Dr. Robert Leigh, 10 George St. North, Cambridge, Ont. Phone: (519) 623-8555 (office) or (519) 632-7737 (home).

ONTARIO — Hamilton. Busy preventive oriented practice. New equipment for sit-down four-handed dentistry. Panelipse — automatic developer etc. Preference to dentist who plans to settle in Hamilton area. Please reply by letter to CDA Box Number 1671.

ONTARIO — Ottawa. Associateship available in a growing downtown preventive practice, enjoying all phases of dentistry. A strong interest in continuing education is essential and a willingness to enthusiastically build own practice is required. Contact: Dr. Paul Greenacre, 170 Metcalfe St., Ste. 304, Ottawa, Ont. Phone: 233-3463, Residence (613) 745-8571.

ONTARIO — Toronto. Associate required for busy full-time general practice in mid Toronto. Excellent income and working conditions with long term possibilities. Available mid 1977. Apply to CDA Box Number 1659.

ONTARIO — Windsor Area. Associate required in a young, progressive group practice. Opportunity to enter group later. New building and equipment; surplus of patients; pleasant, uncrowded office surroundings. Located in small town near Windsor, with close access to all urban and rural social and recreational facilities. Phone: (519) 776-6277 or write: Dr. D. J. Charters, Box 190, Harrow, Ont. N0R 1G0.

OPPORTUNITIES AVAILABLE

BRITISH COLUMBIA — Vancouver. Pedodontist wanted. Opportunity available for pedodontist to join established practice in Vancouver. Associateship leading to partnership. Preventive oriented practice. Contact: Dr. Richard B. Kramer, Suite 708, 2525 Willow St., Vancouver, B.C. Phone: (604) 873-3501.

ALBERTA — Innisfail. Dentist needed to cover very busy practice for four-six weeks, May-June, 1977. Modern office, four-handed dentistry dental hygienist; located in central Alberta (one hour drive north of Calgary). Reason: owner travelling overseas. Write: Dr. C. R. Tym, Box 339, Innisfail, Alta. T0M 1A0, or phone: (403) 227-3011, 227-5312 or 886-5544 (evenings).

SASKATCHEWAN — Moose Jaw. Dental hygienist required. The right party must be able to project humanistically in a preventive dental practice. For the right person — salary and/or commission open to negotiation. Only individuals with a warm understanding of people-to-people relationship need apply. New building; new office; three dentists. Please apply to: T.A.T. Management, 989 James St., Moose Jaw, Sask., or call collect: (306) 692-5561.

MANITOBA — Winnipeg. Oral surgeon certified to practise in Manitoba, required for a busy Winnipeg practice. Object partnership. Please submit qualifications and curriculum vitae, and recent photo to CDA Box Number 1672.

ONTARIO — Dental Underserved Areas. The Ontario Ministry of Health offers financial support for dentists to establish practices in designated underserved dental areas. Locations are available throughout Ontario. Incentive grants, payable over four years, are \$18,000 in Northern Ontario and \$14,000 in Southern Ontario. Alternatively, a guaranteed net professional income of \$28,000 per annum is offered in Northern Ontario. A limited number of salaried positions are open on mobile dental coaches. Apply to: Dental Officer, Program for Underserved Areas, 7 Overlea Blvd., Toronto M4H 1A9. Phone: (416) 965-5036.

ONTARIO — Mount Brydges. Dentist required for a community Health Centre west of London, providing comprehensive health care including dentistry, pharmacy and x-ray. There is affiliation with the University of Western Ontario. Please write: Southwest Middlesex Health Centre, P.O. Box 219, Mt. Brydges, Ont. N0L 1W0. Attention: Mr. J. H. Eakins, President.

QUEBEC — Université Laval, École de Médecine Dentaire. Candidates interested in a full time position at the assistant or associate professor level in the fields of: Bacteriology, Community Dentistry (Preventive), Endodontics, Oral Biology (Occlusion), Oral Diagnosis and Radiology, Pedagogy and audio-visual technics, Periodontics, Pharmacology and Prosthodontics (Complete Dentures), should submit their complete curriculum vitae and all other pertinent information to the under mentioned. Individuals with experience in teaching and research or recent graduates from accredited programs in those fields, who have an interest in education and research will be considered. Candidates must be conversant in the French language or be willing to follow courses in French to become proficient in this language. Duties involve participation in undergraduate teaching, research and intra-mural practice. Rank and salary will be commensurate with education and experience. All duties are included in one remuneration. Docteur Paul Jean Ecole de médecine dentaire, Université Laval, Sainte-Foy, Québec G1K 7P4.

NEWFOUNDLAND — Deer Lake. Urgent, extremely busy practice available the end of February 1977. Excellent town, climate agreeable, fishing, hunting and skiing second to none. Phone: Mr. Kerin McDonald, (709) 635-2135.

SOUTH AFRICA — University of the Witwatersrand, Johannesburg. Faculty of Dentistry, Chair of Experimental Odontology. Applications are invited for appointment to the above vacancy on the staff of the Faculty of Dentistry. Applicants must hold a qualification registrable with the South African Medical and Dental Council. The successful applicant will hold the position of Director of the Joint Dental Research Unit of the South African Medical Research Council and the University. Applicants should state their experience in professional work and in biological research. The salary attached to the post is R15 600. per annum, plus a 10% pensionable allowance. In addition pension and medical aid facilities are available and an annual vacation savings bonus is payable in terms of Government regulations. The University's policy is not to discriminate in the appointment of staff or the selection of students on the grounds of sex, race, religion or colour. Further particulars relating to this practice are included in an information sheet obtainable from the Registrar, University of the Witwatersrand, Jan Smuts Avenue, Johannesburg, South Africa, with whom applications should be lodged not later than April 15, 1977.

ASSOCIATESHIP WANTED

BRITISH COLUMBIA — Vancouver. Preventive oriented associateship desired by 1972 Canadian graduate. Experience in total patient care, chiefly involving crown and bridge, endodontics and pedodontics. A well established busy group practice with high quality care is preferred. Available starting January 1978. Reply to CDA Box Number 1656.

ONTARIO — Toronto. McGill graduate seeking full-time associateship in a modern, preventive oriented general practice commencing on or after June 1977. Reply to: S. Levin, 5372 Westmore Ave., Montreal, P.Q. H4U 1Z8, phone: (514) 482-0195.

QUEBEC — Montreal and Vicinity. Dentist seeks associateship in or around Montreal area. Willing to discuss other terms. Reply to CDA Box Number 1670.

VANCOUVER — TORONTO. Practice wanted. Experienced edgewise orthodontist desires association leading to partnership or purchase of existing quality practice. Please reply to CDA Box Number 1652.

OPPORTUNITY WANTED

BRITISH COLUMBIA — Dentist, aged 28, 1974 graduate of U.S. dental school desires associateship, salaried position or other practice opportunity with minimal initial cash outlay. Previous experience includes private practice and hospital dentistry. Have national dental exam certificate. Prefer U.S. or other western area. Please reply to CDA Box Number 1667.

EQUIPMENT

BRITISH COLUMBIA — Wanted: Dental chair, pump based or electric. Please reply to CDA Box Number 1673, or phone: (604) 339-2342.

WANTED — Panoramic Type x-ray and/or automatic developer equipment. Reply to CDA Box Number 1674.

WANTED — Used Dentatus and Hanau Articulators for Study Club — name price. Reply to CDA Box Number 1666.

MANITOBA — Winnipeg. For Sale: Used equipment (used only 32 weeks). One Ritter x-ray and control box; One Ritter 180 unit; One Dentsply split console unit of Mediterranean design; One Pelton chair and two matching Dentsply stools (amber-tan colour); One each of Caulk Vari-mix and Williams Silimat Amalgamators. Write or call: Dr. R. Kirouac, 1-130 Marion St., Winnipeg, Man. R2H 0T4.

VACATION RENTAL

HAWAII BEACH COTTAGE — The blue of the Pacific; Scent of Polynesian blossoms; Whisper of the palm trees — Oahu. Sleeps four. Tennis, swimming pool. \$260 per week. Condominium. P.O. Box 129-u, Pleasantville, N.Y. 10570, U.S.A.

UNIVERSITY OF ALBERTA FACULTY OF DENTISTRY

PERIODONTICS

Applications are invited for a full time position in the Department of Periodontics. Applicants must be a graduate of an accredited periodontal program and should have a broad clinical and academic background with research experience.

The appointment will be at a senior level, salary according to qualifications and experience. Opportunity is available for involvement in the development of a new periodontal curriculum. Intramural part time practice in new facilities is available.

Please submit application and curriculum vitae to:

Dr. P. D. Schuller
Department of Periodontics
Faculty of Dentistry
University of Alberta
Edmonton, Alberta, Canada T6G 2N8.

UNIVERSITY OF MANITOBA FACULTY OF DENTISTRY

A full-time position is available, which will essentially involve the supervision of senior dental students in an externship program. In each year it will include: (a) eight months' services as a supervisor of dental students in a rural Manitoba community, (b) one month's service within the Faculty of Dentistry itself, (c) two months of providing dental care on northern Indian reserves, and (d) one month's holiday. In addition to salary, living accommodation and maintenance will be provided during time spent outside of Winnipeg.

Candidates must be licensed to practise dentistry in Manitoba and will hold academic rank in the Faculty's Department of Preventive Dental Science. Rank and salary commensurate with experience. Range \$26,000-\$29,000.

Please send applications, with curriculum vitae, to:

Dr. J. W. Neilson, Dean
Faculty of Dentistry
University of Manitoba
780 Bannatyne Avenue
Winnipeg, Manitoba R3E 0W3

Closing date for receipt of application May 31, 1977.

THE UNIVERSITY OF MELBOURNE CHAIR OF CONSERVATIVE DENTISTRY

Applications are invited for appointment to the Chair of Conservative Dentistry. The Professor will be responsible for teaching and research in Conservative Dentistry at undergraduate and postgraduate levels leading to degrees of the University of Melbourne. The successful applicant must hold a dental qualification enabling registration by the Dental Board of Victoria.

SALARY: The base professorial salary of \$A29,687 plus a loading of \$2,500 per annum.

Further information about the position, including details of application procedure, superannuation, travel and removal expenses, housing assistance and conditions of appointment, is available from the Registrar. All correspondence (marked "CONFIDENTIAL") should be addressed to *The Registrar, The University of Melbourne, Parkville, Victoria, 3052, Australia.*

Applications close on Friday, 29 April, 1977.

**THE UNIVERSITY OF BRITISH COLUMBIA
FACULTY OF DENTISTRY**

NOTICE OF VACANCY

Applications are invited for the full-time position of Assistant Professor in the Department of Oral Medicine, University of British Columbia, Vancouver, Canada, to participate in the teaching of Oral Medicine/Oral Diagnosis. Candidates should have had postgraduate training, including hospital dentistry and diagnosis, preferably have had teaching experience, and be registrable as a dentist in the Province of British Columbia.

Salary and rank negotiable according to qualifications and experience. One full day per week of extramural private practice permitted.

The dental school is situated close to the city of Vancouver, population one million; moderate West Coast climate and good recreational facilities.

Applications should be sent to:

Dr. J. D. Spouge
Professor and Head,
Department of Oral Medicine
Faculty of Dentistry
University of British Columbia
2075 Wesbrook Place
Vancouver, B.C., Canada V6T 1W5

DENTAL SURGEONS

The Wascana Institute of Applied Arts and Sciences requires three Dental Surgeons for instructional positions. The duties are to provide academic and clinical instruction in a program for expanded duty dental auxiliaries in a children's dental program. The requirements are: graduation from an approved school in North America or eligibility to be licensed with the College of Dental Surgeons of Saskatchewan; experience and/or ability in dental education of auxiliaries; an interest in preventive dentistry, and experience and knowledge of restorative dentistry for children.

SALARY: \$25,584-\$31,860 Without Specialization
\$27,912-\$34,836 With Specialization

For information and applications contact:

Dr. G. W. Keenan
Program Head
Dental Division
Wascana Institute of Applied Arts and Sciences
4635 Wascana Parkway
Regina, Saskatchewan S4S 5X1

Competition closes when suitable applicants are found.

ADVERTISERS' INDEX

Astra Pharmaceuticals (Canada) Ltd.	IBC
John O. Butler	97
The L. D. Caulk Co. of Canada	109, 110
Colgate Palmolive Ltd.	99
Denco	105
Dentsply International	94, 102, 119
Charles E. Frosst	121
Health and Welfare Canada	129
Lever Brothers	107
Pelton and Crane	101
Procter and Gamble	93
Professional Pharmaceutical	129
Siemens Electric	IFC
Unident	106
Warner Lambert Canada Ltd.	OBC
Weil Dental	114
Whaledent International	117

Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.

UNIVERSITY OF MANITOBA

Invites Nominations and Applications for Position of

DEAN OF DENTISTRY

commencing July 1, 1977

Nominations should be submitted as soon as possible but not later than March 15, 1977 and may be sent to the Chairman of the Selection Committee:

Dr. J. C. Gilson
Vice-President (Academic)
The University of Manitoba
Winnipeg, Manitoba R3T 2N2

**UNIVERSITY OF SASKATCHEWAN
COLLEGE OF DENTISTRY
SASKATOON, CANADA
S7N 0W0**

Applications are invited for the position of Chairman, Department of Periodontics. Duties will include administration of the departmental activities together with involvement in teaching and research. The candidate should have a broad clinical and academic background. The appointment will be at a senior level, and salary will be according to qualifications and experience. Postgraduate or graduate qualifications in Periodontics required.

Letters of application and curricula vitae should be submitted immediately to:

Dr. B. K. Arora
College of Dentistry
University of Saskatchewan
Saskatoon, Saskatchewan
Canada S7N 0W0

Applications will not be considered after March 15, 1977.



If you think waiting for anesthesia onset is hard on you, think what it's like for him.

The more you had to ask "Feel anything?" the more convinced your patient got that he was going to.

So another piece of dentistry got off to a tense start.

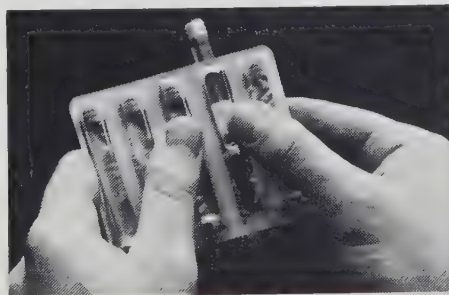
For both of you.

And that's why Astra Canada developed Citanest Forte for routine

ASTRA

Mississauga, Ontario

dentistry. It's fast. It's effective. Yet doesn't take all morning to wear off.



Citanest Forte from Astra. In the handy Kleen Pak.

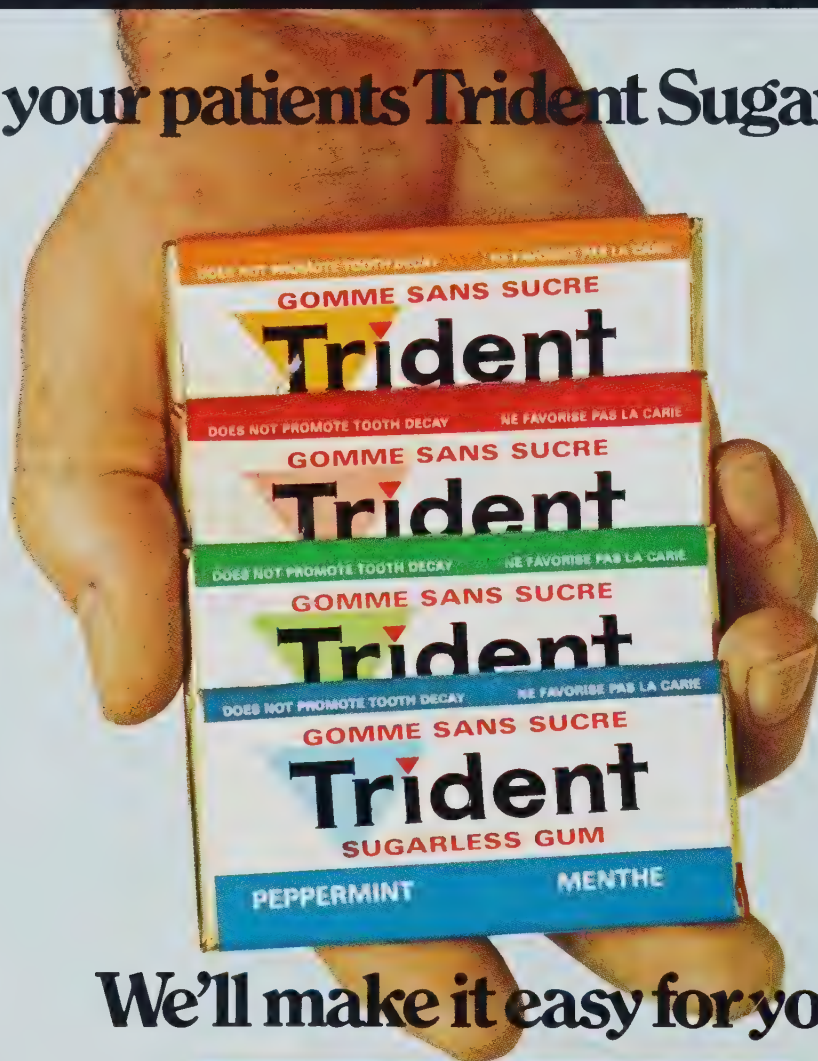
It's making dentistry a whole lot easier for patients.

And a whole lot easier for you.

Citanest[®] FORTE

Set a good example.

Give your patients **Trident Sugarless Gum.**



We'll make it easy for you.

Many dentists tell us that they're handing out Trident Sugarless Gum to their patients who chew gum. Trident is sugarless, so there's no risk of sugar damage to teeth.

Dentists recommend

Please send me the standard dentist's sample order, consisting of: 2 boxes of Spearmint, 2 boxes of Peppermint, 2 boxes of Fruit, and 2 boxes of Cinnamon—a total of 8 boxes (144 packages) for \$10.00. (Ontario dentists include 70¢ Provincial Sales Tax).

Enclosed please find my cheque ☐ money order ☐ in the amount of \$_____.

Name _____

Address _____

City _____ Zone _____ Prov. _____

Send to:
Trident, Box 2147, Toronto, Ontario M5W 1G8

D

that patients use fluoride toothpastes, brush properly and have regular dental check-ups. Now you can set a good example for your patients who chew gum. Give them Trident Sugarless Gum.

U.S. LIBRARY
SERIALS DEPT.
DENTISTRY
455 11th

DENTAL JOURNAL DENTAIRE

Si non livrable
au destinataire
**RETOURNER A
L'EXPEDITEUR**
Port payé

If Undeliverable
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed.

April/Avril 1977/Volume 43/No 4

Canadian Dental Association / Association Dentaire Canadienne

elide/teed
canadian
fund
for
dental
education
annual report
fonds 1976
canadien
pour
l'enseignement
dentaire
rapport annuel

In this issue:

Use of the vitalometer with rubber gloves

Removal of an antral dentigerous
cyst via a modified Caldwell-Luc

Education as a means to prevent
dental problems for the handicapped

Caries under an occlusal sealant



Rapid Relief for discomfort of post extraction,
scaling and gingivitis.

Chloraseptic®

Anaesthetic, antiseptic spray mouthwash and lozenge
Prompt relief of throat, mouth and gum soreness



In a study of 90 patients with oral pain due to pericoronitis, peridontitis, accidental or iatrogenic injury and aphthous ulcer, Novak concluded, "in both immediate and retrospective evaluations, 93% of the patients reported satisfactory relief of pain with Chloraseptic."¹

1. Novak, A.J.: *Oral Surg.* 34:34, July, 1972.



® EATON LABORATORIES
P.O. Box 2002
Paris, Ontario N3L 3G6

Gentlemen,
Please send me a professional sample
of Chloraseptic.

Name _____

Address _____

City _____ Prov. _____

Signature _____



® EATON LABORATORIES
Division of Norwich Pharmacal Company Ltd.
Paris, Ontario

Prevention between visits



Brushing and flossing. Good diet. And CREST.

The at-home contribution to preventive dentistry between professional visits.

CREST has the actual research and recognition of effectiveness.

In fact, CREST has more extensive research than any other fluoride dentifrice, and the only clinical research to prove *added* anticaries protection... over and above the protection provided by office-applied fluorides. Give your patients MORE protection... recommend clinically proven, clinically tested CREST.



"Crest has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."— Canadian Dental Association.



Leadership in research=Confidence in Crest

© 1976 PROCTER & GAMBLE, TORONTO CAS-381



This happy ending...



...had this beginning.

When a denture is the only alternative, *Trubyte Bioblend Anteriors* give you so much to work with to complement your professional skill. The life-like colors of natural teeth. The near perfect simulation of natural tooth form and character. The wide selection of moulds and sizes. Available in porcelain and plastic.

TRUBYTE[®]

Dentsply Canada, Ltd. Toronto 2-B, Ontario

This complete maxillary denture was created with Bioblend color blend 104, Mould 22E. Complete case history with color photographs available on request.



JOURNAL

of the Canadian Dental Association
de l'Association Dentaire Canadienne
April/Avril 1977/Volume 43/No 4

PUBLISHER/Canadian Dental Association
SCIENTIFIC EDITOR/R. S. Turnbull, DDS
EDITOR/Diane Charter
FRENCH SCIENTIFIC EDITOR/Robert Lambert, DDS

MANAGING EDITOR/ADVERTISING/Anna Spencer
EDITORIAL SECRETARY/Mary Maxwell
CLASSIFIED ADVERTISING/Marie Cosgrave
CIRCULATION/Cathy Cronin

ISSN 0382-8514

Regular Features

Announcements	142
Letters to the editor	146
Les actualités dentaires	150
Dentistry in the news	169
Deaths	173
In memoriam	173
FDI/CDA Congress News	174

Articles

Removal of an antral dentigerous cyst via a modified Caldwell-Luc — Friedlander	179
Use of the vitalometer with rubber gloves — King and King	182
Education as a means to prevent dental problems for the handicapped — Levine and Hargreaves	185
Report of a case: Caries under an occlusal sealant — Richardson	188

Classified advertising	191
------------------------	-----

Advertisers' index	196
--------------------	-----

Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1976 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454.

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association.

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1976 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22).

Veuillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences. Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise.

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Canadian Dental Association

1977, Toronto, Oct. 22-28

Fédération Dentaire Internationale

1977, Toronto, Oct. 22-28

Canadian Meetings

College of Dental Surgeons of British Columbia, Annual Convention,

Empress Hotel, Victoria, April 20-23, 1977. Contact: Kenneth L. Croft, Managing Director, 1125 West 8th Avenue, Vancouver, B.C. V6H 3N4.

College of Dental Surgeons of Saskatchewan, Annual Convention,

Regina, April 28-30, 1977. Contact: Dr. D. A. Graham, Convention Chairman, 811 - 105 - 21st Street East, Saskatoon, Sask. S7K 0B3.

NDEB announces 1977 examination dates

The National Dental Examining Board of Canada has announced the following 1977 examination dates:

1. Written examination May 24, 25 and 26, 1977 at selected Universities in Canada and U.S.A.
2. Preclinical examination May 30, 31 and June 1 at The University of Western Ontario in London.
3. Clinical examination June 2 to June 10 at The University of Western Ontario, London.
4. Preclinical examination August 15, 16 and 17 at McGill University in Montreal.
5. Clinical examination August 18 to August 26 at McGill University in Montreal.
6. Written examination October 24, 25, 26, 1977 at selected Universities in Canada and U.S.A.

The examinations in August at McGill University are conditional upon a sufficient number of applicants.

Ontario Society of Periodontists and Canadian Academy of Periodontology,

combined seminar, Chelsea Inn, Toronto, May 6, 1977. Clinicians: Drs. Tony Melcher, Richard Ellen and Robert Schallhorn. Topics to include oral biologic and clinical experimental research as it relates to clinical periodontology. Contact: Dr. Steven Richmond, (416) 491-6211 or Dr. Frank Compton, (416) 922-4223.

Ontario Society of Clinical Hypnosis,

Advanced Workshop on Ericksonian Techniques of Hypnotic Communication with Drs. Bandler and Grinder. The Hyatt Regency Hotel, Toronto, May 7-8, 1977. Contact: Dr. E. Barnett, O.S.C.H., 243 St. Clair Ave. West, Toronto M4V 1R3. Telephone: 922-8300.

Ontario Dental Association, at Sheraton Centre (formerly Four Seasons Sheraton), Toronto, May 8-11, 1977. Mrs. W. C. Durham, 234 St. George St., Toronto, Ont. M5R 2P2.

Les Journées Dentaires du Québec, at Queen Elizabeth Hotel, Montreal, May 16-20, 1977. Dr. R. M. Lang, 5171 Decarie Blvd., Montreal, Que. H3W 3C2.

Third International Congress on Cleft Palate and Related Craniofacial Anomalies, at Royal York Hotel, Toronto, June 5-10, 1977. Congress Secretariat, 191 College St., Toronto, Ont. M5T 1P7.

Western Canada Dental Society, at Banff Springs Hotel, Banff, Alberta. July 3-6, 1977. Dr. D. Pedlar, Publicity Chairman, Western Canada Dental Society, 1711 - 4th St. S.W., Ste 303, Calgary, Alta. T2S 1V8.

Health Care Evaluation Seminar, Memorial University, St. John's, Newfoundland, August 29 - September 2, 1977. Patricia Bruce-Lockhart, Divi-

sion of Community Medicine, Faculty of Medicine, Memorial University of Newfoundland, St. John's, Nfld. A1B 3V6.

Canadian Academy of Restorative Dentistry,

Park Plaza Hotel, Toronto, October 21-22, just prior to the FDI World Dental Congress. Dr. D. B. McAdam, Associate Professor, Department of Restorative Dentistry, University of Toronto, 124 Edward St., Toronto, M5G 1G6.

Canadian Society of Oral Surgeons, Annual Convention,

Hyatt Regency Hotel, Toronto, October 28-31, 1977. Contact: Dr. W. Prusin, Convention Chairman, 919 Ellesmere Rd., Scarborough, Ont. M1P 2W7.

Pacific Dental Federation Convention,

July 23-26, 1978, Vancouver. Contact: Dr. Ken Neuman, President, Pacific Dental Federation, 1125 West 8th Avenue, Vancouver, B.C. V6H 3N4.

International Meetings

Seminar on Syndromes of the Head and Neck,

at Albert Einstein College of Medicine, April 22, 1977. Dr. Robert J. Gorlin, Professor and Chairman of the Division of Oral Pathology, University of Minnesota School of Dentistry will present seminar on "Clefting and non-clefting syndromes of the head and neck". Contact: Director, Postgraduate Dental Program, Albert Einstein College of Medicine, 1165 Morris Park Ave., Bronx, New York 10461. Telephone: (212) 430-2139.

American Academy of Oral Medicine,

at Toronto, May, 1977. Mrs. Joyce Guithues, 829 Hanamore Crescent, St. Louis, 63122.

American Academy of Implant Dentistry, co-ordinated European Confer-

Bristle up your patient's plaque attack

introducing **Py-co-pay[®]** **Softex 4[®]**

When a 4-row brush is
preferred for plaque control,
commend the only 4-row
that can make these claims.

Over 3,200 bristles in
Softex 4 work to ensure extra
cleaning power, especially in the
plaque-prone sulcular region

.007" diameter nylon
bristles offer safer, more
penetrating cleansing of
supragingival and subgingival
plaque from sulci, occlusal
pits, fissures and
interproximal surfaces

double-rounded,
end-polished bristle tips
help protect tissues from
possible abrasion

- **compact brush head**
slimmer and more manoeuvrable
— makes it easier to clean
hard-to-reach areas of the
teeth and gingival sulci
- **smooth, rounded head
contours** not sharp or
angular — helps diminish the
danger of trauma to sensitive
tissues, especially those
opposite the buccal of the molars
- **tapered head design**
less plastic bulk — provides
immediate contact of the bristles
with teeth and gingivae

Choose the Softex that fits your patient's needs

SOFTEX JUNIOR	SOFTEX 3	SOFTEX 4
3 staggered rows 1200 bristles	3 staggered rows 2400 bristles	4 rows 3200 bristles



Professional Relations Division
Block Drug Company (Canada) Ltd.
36 Northline Rd., Toronto, Ontario M4B 3E3
"Quality Products for Dental Health"

ence in London, England, and Zurich, Switzerland, May 1-9, 1977. Dr. Charles A. Babbush, 5 Severance Circle, Cleveland Heights, Ohio 44118.

U.S.C. Annual Dental Seminar of Mexico, at Hotel Ixtapan, Ixtapan de la Sal, State of Mexico, May 15-19, 1977. Topics include periodontal therapy, restorative dentistry, emergencies in the dental office, and oral surgery. Contact: Dr. Abraham Chisikovsky, Treasurer, Seminario Anual del Grupo de Estudios Dentales U.S.C. de Mexico, A.C., Horacio 1840, Mexico 10, D.F.

Fourth Annual Alpha Omega Study Mission to Israel, including symposium on "newer concepts in oral biology and their clinical implications". Organized by the Hebrew University, Hadassah School of Dental Medicine, Israel, and the Toronto Alumni Chapter of the Alpha Omega Dental Fraternity, to be held in Jerusalem, May 19-20, 1977. Contact: Dr. Hart J. Levin, 2006 Bathurst St., Toronto, Ont., or Professor Isaac Ginsburg, Dean, Hadassah School of Dental Medicine, P.O. Box 1172, Jerusalem, Israel.

American Academy of Orthodontics for the General Practitioner, Inc., at Delavan, Wisconsin, May 23-26, 1977. Mrs. M. L. Watson, 3953 North 76th St., Milwaukee, 53222.

American Academy of Pedodontics, at Bal Harbour, Florida, May 29 - June 1, 1977. Merle C. Hunter, 211 East Chicago Ave., Suite 1235, Chicago, Illinois 60611.

Pain Control in Dentistry, World Congress, Mauritius Island, June 7-9, 1977. Contact: Dr. Paul Virapin, Executive Secretary, 15, avenue de Maurin, 34000—Montpellier, France.

American Dental Association, 28th Annual Management Conference, at ADA Headquarters, Chicago, June 13-15, 1977. American Dental Association, 211 East Chicago Ave., Chicago, Ill., 60611, USA.

Northeast Regional Oral Surgery Meeting, Lake Placid, New York,

June 24-26, 1977. Topic: Pain and pain control. Dr. Thomas Lanka, 1325 Union St., Schenectady, New York 12308.

British Dental Association, Annual Conference, Aberdeen, June 30 - July 3, 1977.

Third International Odontological Congress of the Brazilian Dental Association and First National and International Congress of the Odontological Services of the Armed Forces, Federal University of Rio de Janeiro, Brazil, July 15-21, 1977. Contact: Associacao Brasileira de Odontologia, Avenida 13 de Maio, 13-10 andar, conjuntos, 10001/2-5/116, Rio de Janeiro, R.J., Brazil.

International Association of Oral Myology, Fifth Annual Convention, Lodge of the Four Seasons, Lake Ozark, Missouri, June 18-21, 1977. Contact: Dr. John Howland, 457 Coventry Green, Suite 120, Crystal Lake, Illinois 60014.

American Dental Society of Europe, Island of Rhodes, June 27 - July 2, 1977. Dr. James Molony, Secretary, 110 Harley St., London, W.I., England.

Swedish Dental Hygienists' Association, Sixth International Symposium on Dental Hygiene, at Stockholm, Sweden, June 30 - July 2, 1977. Symposium theme: plaque control. Working language: English. Eve Runsten, Secretary General, Sixth International Symposium on Dental Hygiene, c/o RESO Congress Service, S-105 24 Stockholm.

Hungarian Dental Association, Twelfth Congress, at Pécs, Hungary, August 25-27, 1977. Contact: Professor I. Szabo, 7621 Pécs, Dischka Gyozo u.5. Hungary.

International Epidemiological Association, Eighth International Scientific Meeting, at Las Croabas, Puerto Rico, Sept. 18-23, 1977. Dr. Carlo Luis Gonzalez, Program Secretary, Universidad de Los Andes, Facultad de Medicina, Centro de Estudios de Post-Grado, Merida-Venezuela.

International Association for Orthodontics, Annual Meeting, Bayshore Inn, Vancouver, B.C., September 21-25, 1977.

Dental Association of South Africa, Fifth International Scientific Congress, Stellenbosch, Republic of South Africa, Sept. 26-30, 1977. Contact: Dr. L. S. Maresky, Congress Secretary, P.O. Box 96, 7503 Parowvallei, C.P., South Africa.

Society for Clinical and Experimental Hypnosis, 29th Annual Workshops and Scientific Program, Hyatt House Hotel, Los Angeles, October 11-16, 1977. Mrs. Marion Kenn, Administrative Director, SCEH, 129A Kings Park Drive, Liverpool, New York 13088.

Winter Medical-Dental Assembly, Nairobi, Kenya, East Africa, October 28 - November 18, 1977.

Eighth Paulista Convention of Odontology and the 10th Latin American Seminar of Odontology, Sao Paulo, Brazil, January 21-28, 1977. Dr. Edmir Matson, General Secretary, Rua Humaitá 389, Caixa Postal 2523, CEP 01321, Sao Paulo, Brazil.

Australian Dental Association, Jubilee Congress, Melbourne, Feb. 12-16, 1978. Contact: W. Don Hefron, Federal President, Australian Dental Association, 116 Pacific Highway, North Sydney, N.S.W.

Circulo Odontologico Del Sur (Southern Argentina Dental Society), Second International Congress and Third Socio-Economic Congress, Bahia Blanca, Argentina, May 25-28, 1978. International lecturers will deal with all clinical specialties. Contact: Dr. R. L. Ellis, Associate Professor, Department of Community Dentistry, University of Toronto, Faculty of Dentistry, 124 Edward St., Toronto, M5G 1G6.

New Zealand Dental Association, Ninth Biennial Conference, Christchurch, August 20-25, 1978. Contact: R. C. Service, Honorary Secretary, N.Z.D.A. Biennial Conference Committee, P.O. Box 1301, Christchurch, New Zealand.

for teeth under attack.



The professionally designed
tooth/gum brush
for preventive dental care.



Cooper

Cooper Laboratories Limited, Boisbriand, Quebec

Winnipeg Free Press Editorial

The January issue of the Journal of the Canadian Dental Association has reprinted the November 19, 1976 editorial from the Winnipeg Free Press. The editorial contains many errors of fact that were pointed out in my reply of December 9, 1976, which was printed by the Winnipeg Free Press on December 15, 1976. I herewith enclose a copy of my reply and request, in the interest of accurate information for your readers, you give it equal prominence in your Journal.

In January of this year, after both letters were published, the Saskatchewan Department of Health officially released the Quality Evaluation of Specific Dental Services Provided by the Saskatchewan Dental Plan, February, 1976. This study, conducted by recognized experts, would seriously question the point that "superior-care" can be offered by dentists.

I thank you for this chance to reply.

*Laurent L. Desjardins,
Minister of Health and
Social Development,
Winnipeg, Manitoba.*

The following is Mr. Desjardins' letter to the Editor of the Winnipeg Free Press:

"Your editorial of November 19th criticizing the Manitoba Children's Dental Program contains many errors, some of which could have been avoided had the writer referred to information contained in previous issues of your own paper.

"Firstly, your editorial states that the dentists' concern over costs are just now surfacing. I must remind you that an editorial raising that same point appeared on your editorial page on April 22nd of this year. On May 3rd,

your paper published my reply to that article in which I stated the \$350.00 per patient was not accurate, and that the costs would decline significantly when the program was fully phased-in.

"Secondly, your editorial states that the program will service six year olds in the Gimli area with seven dental nurses. A careful reading of a news item appearing in your paper on April 13th would have revealed that the whole Interlake area, the areas served by the Duck Mountain and Swan Valley School Divisions, and the City of Flin Flon are to be covered. The reader of the April 13th news item would have been able to learn that the program will eventually cover children from 3-12 and not 6-12 as was stated in the November 19th editorial.

"Thirdly, a careful reading of your files would have revealed that the officials of the Manitoba Dental Association have been publicly criticizing the Manitoba Children's Dental Program since at least January 27, 1976. It would have been difficult for any public campaign to have been organized prior to this, since the government's decision on the guidelines of the program had only been made and transmitted to the president of the Manitoba Dental Association the month before. The fact that dentists and others associated with the Manitoba Dental Association have commented frequently on the program since that time certainly discredits the claim in your editorial that the dentists were muzzled.

"I might also add that I deny having made any threats in an attempt to prevent the Manitoba Dental Association from mounting a high profile publicity campaign. While the above errors could have been avoided by perusal of your own files, there are

some further mistakes I am only too happy to correct for the record.

"The claim reportedly made by Dr. Crawford that the discussions between the Manitoba Dental Association and the government had no effect upon the program is contrary to the facts. The Standards Committee of the Manitoba Children's Dental Program has representatives of the Manitoba Dental Association who continue to provide valuable input into the quality standards of the program. This Standards Committee was established in the discussions with Dr. Crawford. Our system of referred services and our provision for examinations and supervision to be done by private practitioners are a variant from the Saskatchewan model. These were specifically designed to meet the concerns of the Manitoba Dental Association negotiators over the lack of patients for rural dentists.

"The information on the Saskatchewan costs also contradicts the facts as published in the Saskatchewan Dental Plan report on its first year's operation. In contrast to your figures in the editorial of \$200-285 per enrolled child, the published total operating costs work out to \$180.56 per child.

"We have every intention of operating the program during school vacation periods; therefore, the staff will be available for both normal and emergency services during those periods. We are also planning to arrange for access to school clinics as required for emergencies in the off hours.

"Our analysis of the dental needs in rural areas would indicate that there is more than sufficient need for existing dentists in the rural and northern areas. Certainly the present 75 dentists would appear to be insufficient for our 471,000 rural and northern citizens."

Concerned about Journal

I would like to express my concern about the present scientific calibre of the Journal of the Canadian Dental Association.

For a Journal that represents itself to be the official Journal of the Canadian Dental Association its contents are sadly disappointing. Typically there are only one or two articles, some news items, a short editorial and masses of advertising which are reminiscent of the days of proprietary journals.

In the January 1977 issue for example, even a feature article was borrowed from a daily newspaper editorial, apparently without verifying the accuracy of the statements. And it was "nice" to see a pretty cover and to learn that a Canadian dentist had been honoured for his photographic skills.

Is this then the Journal of which we Canadian Dentists are to be proud? Perhaps it is too much to expect the Journal to attain the standard of other general dental journals such as the Journal of the American dental Association, the British Dental Journal, the International Dental Journal and Dental Abstracts. It is true that we in Canada cannot draw upon the resources that are available to the American Dental Association or to the British Dental Association. However it surely is not too much to expect that our Journal attain the standard of the Australian Dental Journal or the New Zealand Dental Journal.

*J. Nasser, DDS
Supervising Dentist
Saskatchewan Dental Plan*

Dentists' Wives Association

On behalf of the Ottawa Dentists' Wives Association, I would like to thank the Canadian Dental Association for providing us with the use of its facilities for our wine and cheese party. We are pleased to report that we raised \$1,682 — all of which will be used to help local marginal income families to obtain badly needed dental care.

I know that many of our members were looking forward to meeting Mr. Lloyd Stevenson and the CDA staff and

to touring the facilities and I speak for them when I thank the Executive Director for being such a congenial host.

On behalf of us all, thank you. In closing, I would like to thank Mr. Stevenson and his staff personally for making my job easier and more agreeable. If ever we can be of assistance to the CDA, please do not hesitate to contact us.

*Susan Burgess,
Ottawa Dentists' Wives Association,
Ottawa, Ontario*

The good old days

While browsing through the university library several weeks ago, I happened to glance upon one of the more ancient dental journals in the stacks. Being a dental student, I thought it would be of some interest to find out what typical articles dated near the turn of the century were about.

The first one I came upon told of an apprentice dentist who, arriving at the office before his preceptor, decided after much groaning from an early morning patient to remove the fellow's ailing tooth. When the dentist arrived

soon afterwards it was recognized that the tooth should not have been extracted. The duo prepared the tooth and ran out the door. They then brought back the patient and reinserted the tooth which lasted functionally for eight more years.

Another short article I read is at the end of this letter. I found the time spent with this journal quite enlightening. Perhaps it would be of some interest and value to begin a column in the Dental Journal enabling present day dentists to recall such past events.

*David Kogon, BSc,
Dents'80,
University of Western Ontario.*

"Milwaukee, Wis.; Nov. 22 — Thomas Flynn, sixty years old and a courier by trade, living at 222 Pierson Street, was strangled by his set of false teeth tonight. Flynn was eating supper at the time. In some manner the teeth became loose and went down his throat with his food. He made frantic efforts to remove them, but in vain and he strangled to death before the arrival of a physician who was summoned."

— *The Dental Review*,
1891, page 952

Second Canadian Congress of Dentistry for Children

Dates: May 20-22, 1977 (Friday, Saturday, Sunday)

Place: Queen Elizabeth Hotel, Montreal

Registration: \$100.00

Information: Dr. David Kozloff

3333 Queen Mary Rd. #490

Montreal, Que. H3V 1A2

All dentists will be receiving a program pamphlet with complete information.

Deuxieme Congrès Canadien de Dentisterie Pédiatrique

Date: le 20-22 mai, 1977 (vendredi, samedi, dimanche)

Endroit: Hôtel Reine Elizabeth, Montréal

Inscription: \$100.00

Renseignements: Dr. David Kozloff

333 Ch. de la Reine Marie #490

Montréal, Que. H3V 1A2

Tous les dentistes recevront bientôt un programme contenant tous les renseignements.

Now there are three Dentsply®-Cavitron® Units.

They have their differences.

What they have in common is their uncommonly gentle and efficient prophylaxis.

The Dentsply®-Cavitron® **Powermatic®** Ultrasonic Dental Unit.

With fingertip on-off control
and fingertip power control.
No—repeat no—foot control!

Engineered to be the ultimate
in ultrasonics for modern dentistry.

Total solid state circuitry. Automatic fine tuning.

Fingertip control. With a flick of the finger you activate the handpiece or turn it off. Another flick and you change power from high to medium to low.

Plug-in handpiece. Smaller, lighter, perfectly balanced.

Accepts all Dentsply-Cavitron inserts.

Tested and approved. Listed by Underwriters Laboratories, Inc. and CSA Testing Laboratories.

The Dentsply®-Cavitron® **"1010"** Ultrasonic Dental Unit.

Slim, sleek, beautifully engineered
...with automatic tuning.

Total solid state construction. Automatic fine tuning. Just choose the insert you wish to use . . . the instrument is instantly and automatically at its precise best for any operation.

Automatic cord retraction and storage. Pull out as much cord as you wish to work with . . . there's a "stop" every four inches. When finished, a gentle tug returns handpiece and cord to concealed position.

Accepts all Dentsply-Cavitron inserts.

Tested and approved. Listed by Underwriters Laboratories, Inc. and CSA Testing Laboratories.

The Dentsply®-Cavitron® **"Seventy Six™"** Ultrasonic Dental Unit.

All the best of the famous "660" ...
plus some things that are
new, different and better.



Lighter in weight, dimensionally smaller. Total solid state construction for reliability and "instant on" readiness.

Linear frequency control for easy, one-finger tuning. Higher maximum power output, wider power range. Works harder or more gently, as you need it.

Sophisticated printed circuit board makes servicing easy. Foot switch energizing control.

Plug-in handpiece for easy servicing and repair in the field.

Accepts all Dentsply-Cavitron inserts.

Tested and approved. Listed by Underwriters Laboratories, Inc. and CSA Testing Laboratories.

Ask your dealer to demonstrate
how the Dentsply®-Cavitron® Units differ, and how
they are the same.

DENTSPLY™
Equipment

D Dentsply International, York, PA

© 1977 Dentsply International, Inc. All rights reserved. Note: "CAVITRON", "POWERMATIC" and "SEVENTY SIX" are trademarks of Cavitron Corporation.



These Dentsply-Cavitron Ultrasonic Scaling Devices are Acceptable for use in scaling and cleaning surfaces of teeth in conjunction with other suitable prophylactic measures.



L'ASSOCIATION DENTAIRE CANADIENNE, ORGANISME D'ACCUEIL POUR LE 65^{ème} CONGRES DENTAIRE MONDIAL ANNUAL DE 1977

On s'attend à ce que quelque 15,000 représentants provenant du monde entier se réunissent à Toronto du 22 au 28 octobre 1977, alors que l'Association dentaire canadienne accueillera le 65^{ème} congrès dentaire mondial annuel de la Fédération dentaire internationale. Ce Congrès sera tenu conjointement avec l'assemblée nationale annuelle de l'ADC pour 1977. La préparation du programme prévu pour le Congrès est déjà très avancée et l'on anticipe l'établissement d'un équilibre parfait entre le stimulant programme scientifique et les divertissantes activités sociales. Le programme scientifique, auquel participera une multitude impressionnante de conférenciers de réputation internationale, aura pour base trois thèmes principaux:

1. "L'adhésion dans l'environnement buccal".
2. "Nouvelle optique de la douleur et de sa suppression".
3. "Santé buccale et qualité de vie".

Le programme scientifique sera officiellement inauguré le 24 octobre par une tribune traitant du thème No 1. Le Dr D. C. Smith, du Canada, présidera cette tribune à laquelle participeront les conférenciers suivants: le Dr L. Weiss, États-Unis, parlera d' "Adhésion cellulaire"; le Dr F. C. M. Dreissens, Pays-Bas, d' "Adhésion chimique"; le Dr D. Beech, Australie, de "Considérations biophysiques et biochimiques"; le Dr D. H. Retief, Afrique du Sud, d' "Adhésion mécanique" et le Dr P. O. Glantz, Suède, d' "Adhésion aux dents".

L'après-midi, une séance publique tenue par la Commission sur les fournitures, instruments, équipements et thé-

rapeutiques dentaires, traitera de "L'adhésion pour les fournitures dentaires". Le Dr J. W. Stanford, États-Unis, présidera la séance, à laquelle participeront les conférenciers suivants: le Dr D. C. Smith, Canada, parlera d' "Aspects cliniques de réussites et d'échecs concernant l'adhésion lors d'utilisation de ciments de scellement"; le Dr Mjör, Norvège, de "Restrictions biologiques en regard de l'adhésion clinique dans la bouche"; le Dr R. L. Bowen, ÉU, de "Fournitures restauratrices composées et leurs propriétés d'adhésion dans la bouche"; les Drs P. O. Glantz et I. L. Dogon participeront également à cette séance.

Également à l'ordre du jour l'après-midi, figurent les conférenciers suivants: le Dr Gordon J. Christensen, ÉU, entretiendra les délégués de "Nouvelles techniques et fournitures cliniques pertinentes dans le domaine de la restauration" et le Dr V. Andreev, Bulgarie, discutera le "Diagnostic et traitement de cancer buccal".

Le deuxième thème scientifique du programme sera étudié au cours d'une tribune qui aura lieu mardi matin, le 25 octobre. Le Dr B. J. Sessle, Canada, présidera la séance et prononcera une conférence traitant du sujet suivant: "Comment expliquer la douleur et quelle est son origine?" Les conférenciers suivants participeront également à cette séance: le Dr B. Matthews, Royaume-Uni, parlera de "Mécanismes de douleur dentaire"; le Dr M. Weisenberg, ÉU, de "Mécanismes psychologiques de suppression de douleur"; le Dr J. Duncan, Canada, de "L'utilisation de suggestion hypon-

tique en ce qui concerne la suppression de douleur au cours de l'exercice quotidien"; et le Dr R. Dubner, ÉU, de "Nouvelles méthodes destinées à mesurer et à maîtriser la douleur".

Pour l'après-midi, la Division des sciences du comportement de l'Association internationale de recherche dentaire a organisé un symposium qui traitera des "Facteurs émotifs dans le cadre des rapports entre le patient et le dentiste".

Mercredi matin, le 26 octobre, une tribune présidée par le Dr D. B. Scott, ÉU, traitera du thème scientifique No 3, soit "Santé buccale et qualité de vie". Parmi les conférenciers, figurent les Drs R. P. Ellen, J. Tonzlich et D. L. Anderson, tous du Canada; le Dr D. E. Barmes, Suisse; le Dr E. Møller, Danemark; et le Dr J. Miller, Royaume-Uni.

Prévu pour l'après-midi, un symposium présidé par le Dr Lois K. Cohen, ÉU, traitera de "Qualité de vie et la profession dentaire" dans le cadre de la profession de dentiste, de l'étudiant dentaire et de l'auxiliaire dentaire. Les Drs G. Orner, ÉU, R. Cohen et mlle. Iris L. Gold du Canada, participeront à ce symposium. Une séance publique organisée par la Commission sur l'éducation dentaire aura lieu l'après-midi, dans le but d'étudier l' "Efficacité et organisation de l'éducation permanente dans le domaine dentaire".

En outre, à l'ordre du jour pour l'après-midi, figure un programme en langue française. Le Professeur P. Desautels, Canada, prononcera une conférence traitant de l' "Étude comparative des amalgames à la teneur élevée

en cuivre". Le Professeur P. P. Giroux, Canada, parlera de "Préparation de la cavité pour l'amalgame à l'aide de pivots", et le Professeur H. Sahel, France, de "Problèmes de couleur en ce qui concerne les couronnes et bridges".

Le Dr G. E. Sparrow du Canada prononcera au cours de l'après-midi une conférence intitulée: "La photographie en regard de l'art dentaire et des loisirs".

Jeudi matin, le 27 octobre, deux symposia: le premier traitera de "L'endodontie aujourd'hui" et le deuxième, parrainé par l'Association internationale des stomatologistes, d' "Inclusion de la troisième molaire". Les participants au deuxième symposium comprendront les Drs A. Antoni, Bahamas; B. Aziz, Israël; J. Rud, Danemark; R. Weisenbaugh et R. Shira, ÉU; et P. Chapnick, Canada. Le Dr Chapnick présidera la séance.

A l'ordre du jour l'après-midi figure une séance publique organisée par les Commissions sur les Services de santé dentaire publique et sur l'exercice dentaire. Cette séance aura pour thème: "Organisation des services dentaires au Canada".

Un symposium, présidé par le Dr I. Lightman, ayant trait aux "Problèmes médicaux et dentaires pour les patients âgés", a également été organisé avec les participants suivants: Drs M. Mass-

Le Dr. W. G. McIntosh est nommé président du comité d'organisation

Le Dr William G. McIntosh a été nommé président du Comité d'organisation de la FDI/ADC, créé pour organiser le 65ème Congrès dentaire mondial annuel de la Fédération dentaire internationale, qui aura lieu à Toronto du 22 au 28 octobre 1977 conjointement avec l'assemblée nationale de l'Association dentaire canadienne pour 1977.

L'adresse postale du bureau du Congrès FDI/ADC est la suivante: CP 6423, Terminus A, Toronto, Ont. M5W 1X3. Téléphone: (416) 967-5181.

ler et S. Epstein, ÉU; M. Miller, H. Himel et I. Lightman, tous du Canada. Le professeur C. Enwonwu, du Nigéria, prononcera une conférence traitant de "Nutrition et santé buccale".

Ce qui précède ne représente que certains des événements saillants du programme scientifique prévu pour le Congrès dentaire mondial. Les conférences, symposia et tribunes seront accompagnés de cliniques sur table, de

films, d'expositions scientifiques ainsi que d'importantes expositions commerciales.

Les séances scientifiques auront lieu à l'hôtel Royal York, qui servira de siège social au Congrès, et à l'"Automotive Building" qui fait partie de la Canadian National Exhibition. Des autobus spéciaux feront la navette entre les expositions et les hôtels de Toronto pour la durée du Congrès.

Savant itinérant

Avez-vous déjà remarqué comme votre représentant Denco semble être bien informé et intéressant? Il est possible, évidemment, qu'il soit très intelligent. Mais cela pourrait être aussi dû en grande partie au "collège d'études appliquées sur les produits dentaires" de Denco.

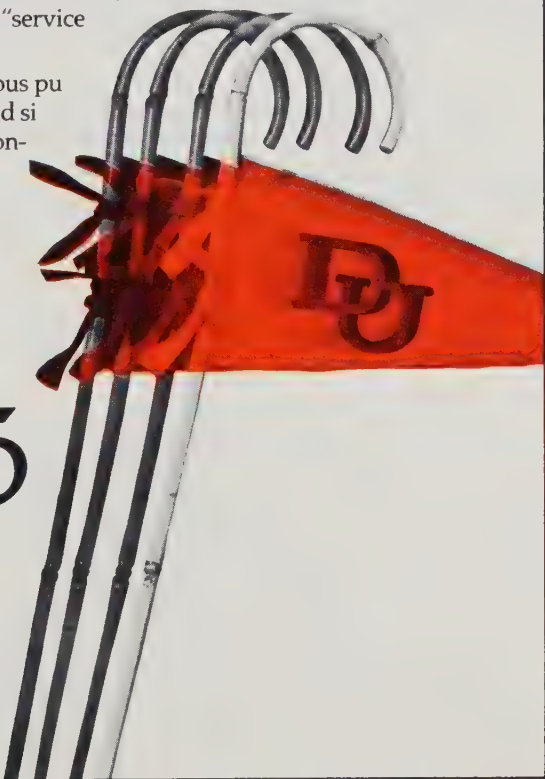
Ne ricaniez pas, s'il vous plaît. Denco prend ses programmes de formation professionnelle très au sérieux... y compris le recyclage continu du personnel, sa mise au courant en ce qui concerne les toutes dernières réalisations en fait de pratiques, procédés, produits, techniques et tendances dans le domaine dentaire. La même chose est vraie en ce qui concerne l'importance que nous attachons au maintien de normes élevées de "professionnalisme", de "service personnel" et de "service après-vente".

Sinon, comment aurions-nous pu réunir une équipe qui répond si bien aux exigences professionnelles de chaque dentiste?

Parlez à votre représentant Denco.

Il s'y connaît... et il est là pour vous servir.

DENCO



LE PRESIDENT DE L'AMERICAN DENTAL ASSOCIATION INCITE A L'UNITE AFIN QUE LES DENTISTES PUISSENT FAIRE FACE AUX DEFIS ACTUELS

Les choses évoluent rapidement et il est indispensable que tous les secteurs de la profession dentaire collaborent afin d'être en mesure de faire face aux changements. Voici le message présenté par le Dr Robert B. Shira, président sortant de l'American Dental Association, lors du discours présidentiel qu'il a prononcé à la Chambre des délégués de l'ADA au cours de l'assemblée annuelle de 1976 tenue à Las Vegas.

Le Dr Shira a énuméré les graves difficultés auxquelles fait face la profession: diverses pressions gouvernementales: complexités des régimes dentaires prépayés; questions concernant les fonctions des auxiliaires dentaires; structure et finances de l'Association même.

“L'un des problèmes les plus graves auquel nous faisons actuellement face est la fragmentation qui se produit au sein de notre profession”, a-t-il déclaré. “Nous ne pouvons nous permettre de gaspiller nos ressources et nos forces par la communication de messages dissemblables”.

Le Dr Shira a ajouté que la totalité de la profession aurait intérêt à faire entendre une voix unie à ses divers

publics, notamment au gouvernement, aux syndicats, à l'industrie, aux groupes de consommateurs et avant tout, au grand public.

En vue de promouvoir l'unité au sein de la profession, il a suggéré à titre d'exemples que la profession reconnaisse la contribution apportée par les auxiliaires dentaires et qu'elle accepte le fait que les régimes dentaires prépayés existent définitivement.

“Il faut se rendre compte qu'à l'avenir la profession dentaire s'exercera de diverses façons”, a-t-il expliqué. “Sans aucun doute, l'exercice privé survivra sous la forme de cabinets individuels, d'associations ainsi que de pratiques de groupe. Les dentistes exerceront au moyen de programmes à base de capitation éthique et il y aura certainement une expansion des cliniques subventionnées destinées à soigner les indigents.”

Le Dr Shira a ajouté qu'en vue de préserver un système efficace de services, il était important que les professionnels des domaines dentaires collaborent aux changements prévus pour l'avenir.

“Bien que les soucis et préoccupations du dentiste soient faciles à

identifier, la difficulté consiste à trouver des solutions adéquates à ses problèmes: le dentiste se soucie de l'amplification rapide des régimes prépayés, des programmes de santé subventionnés par le gouvernement, des organismes de révision de standards professionnels, ainsi que de la menace d'institution d'un régime d'assurance-maladie.

Le Dr Shira a également énuméré les graves problèmes financiers auxquels fait face l'Association à l'égard de la tâche qu'elle doit remplir. Il a expliqué aux délégués qu'une augmentation de leur cotisation était essentielle et “vous devez sérieusement considérer cette question”. Jamais, au cours de l'histoire de notre profession, n'avons-nous été soumis à autant de pressions exercées dans le but de modifier le système actuel de services ainsi que l'exercice de notre profession tel que la pratiquons aujourd'hui.

“Nous devons faire face à ces problèmes et essayer de les résoudre à notre avantage. Notre Association subira les conséquences néfastes d'un financement inadéquat en ce qui concerne ses nombreuses responsabilités”.

L'APPUI APPORTE PAR LES DENTISTES AU FCED BAT TOUS LES RECORDS

“Les dentistes ont personnellement contribué en 1976 une somme de \$57,000 au Fonds canadien pour l'enseignement dentaire et ils ont ainsi dépassé l'objectif de \$55,000”, annonce le Dr J. W. Neilson, président du Conseil d'administration du Fonds.

“Les administrateurs du Fonds ont décidé au début de l'année dernière qu'il faudrait que les dentistes démontrent d'une manière tangible leur conviction

que le FCED est en mesure de fournir efficacement toute l'aide dont les divers domaines de l'enseignement et de la recherche dentaires ont besoin et qu'ils méritent”.

“Le fait de dépasser l'objectif et d'augmenter l'aide financière professionnelle obtenue en 1975 de 27 pour cent réconfortera et encouragera tous ceux qui sont associés au Fonds. Ce

geste présage bien pour l'avenir de la profession”, a déclaré le Dr Neilson.

“Nous présenterons des renseignements détaillés sur toutes nos activités lors de la publication de notre rapport annuel. Toutefois, dans l'entretemps, je suis heureux de vous faire savoir que nos revenus d'exploitation pour l'année 1976 se sont élevés à un total de \$190,000, somme qui bat tous les records”.



Son traitement au fluorure est terminé. Laissez le fluorure de Colgate prendre la relève.

Le fluorure MFP* de Colgate* donne à vos clients une protection supplémentaire contre la carie, entre deux traitements.

C'est un fait. Nos tests cliniques ont prouvé que l'emploi **seul** de Colgate au fluorure MFP réduisait considérablement le taux de caries nouvelles. Dans le cadre d'un traitement local, il devrait donc entraîner une réduction encore plus notable.

Colgate au MFP présente des avantages spécifiques et importants:

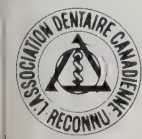
1. L'usage régulier de Colgate rend les dents plus **résistantes à la carie**. Nous croyons que le MFP

(monofluorophosphate de sodium) contenu dans Colgate parvient à transformer la couche d'apatite qui recouvre les dents, en fluorapatite (un fluorophosphate de calcium), grâce à la similarité de propriétés chimiques de ces deux substances.

2. Tandis que certains dentifrices ont tendance à tacher les dents, il est bon de savoir que Colgate avec MFP ne présente pas ce problème.

3. Colgate au MFP est reconnu pour la **stabilité de son fluorure**; même après trois ans, le monofluorophosphate de sodium reste présent et efficace.

Aussi, dès que vous aurez terminé leur traitement au fluorure, parlez à vos clients de cette protection supplémentaire que leur apporte le dentifrice Colgate au MFP. Donnez-leur une chance de plus de lutter contre la carie.



"Colgate avec MFP s'est révélé un dentifrice préventif contre la carie dentaire et son emploi peut avoir une valeur importante lorsqu'on l'utilise dans le cadre d'un programme d'hygiène buccale exécuté avec application et de soins dentaires professionnels réguliers."

L'Association Dentaire Canadienne.

Colgate-Palmolive Canada.

*TM Reg'd.

QUE NOUS REVERSE L'AVENIR DE LA DENTISTERIE?

Il est téméraire de prédire ce que nous réserve l'avenir de la dentisterie, à partir des voies qui se sont tracées dans le passé et aussi à la lumière des interventions sans cesse plus intrusives (d'autres diront provocantes) du socialisme vers lequel tend notre société.

Pourtant, il est nécessaire d'avoir une vision de l'avenir, de tenter de s'accomoder aux changements déjà fortement amorcés, de prévenir les chocs, compagnons fidèles des changements.

Le sujet est bien vaste et bien rempli d'embûches. Vaste parce que les éléments sociaux, économiques, politiques sont en cause, rempli d'embûches, parce que notre profession est un peu similaire à la France que l'humoriste Pierre Daninos a dépointe comme étant divisée entre quarante et quelques millions de Français. Le sectarisme, au surplus favorise moins le dialogue que la discorde. Aussi devons-nous, nous trouver heureux que le caractère hermétique de notre profession commence à s'effriter. S'il faut s'en réjouir, il est encore plus important de regarder bien en face les effets du décloisonnement que affecte maintenant tous les services de la santé, effets dont on ne soupçonne peut-être pas encore toute l'ampleur éventuelle.

Le décloisonnement dont on entrevoit les effets, notamment à travers les interminables négociations, sont devenus un mode de vie et il est inévitable qu'il se rendra jusqu'au cabinet du

dentiste, par les mêmes cheminements et mécanismes qui mettent en cause la médecine et la pharmacologie. On assiste déjà à l'unification de tous les services de la santé. De nos jours, on fait beaucoup de procès à la médecine. Ceux de la pharmacie ne datent pas d'hier, n'est-il pas imminent que demain on pénétrera davantage les problèmes de la profession dentaire?

Or, ces problèmes sont nombreux et il est étonnant que les médias d'information ne leur aient pas encore accordé le tapage susceptible de donner des sujets de discussions animés.

C'est donc par le biais de la médecine qu'il faut envisager nos perspectives futures.

Chez les médecins, le décloisonnement s'est fait sur un double aspect. On met la médecine même en cause en l'associant avec la transformation qui en ferait une source de distribution de biens de consommation. Yvan Illich (*Némésis Médical* p. 15) va même plus loin lorsqu'il écrit: "L'industrie des soins est un des grands secteurs économiques dont l'expression est la plus rapide."

Dans l'édition du *Montréal-Matin* (11 oct. '76, p. 13) M. Gilles Barleau, professeur en pharmacologie de l'Université Laval, trouve difficile maintenant de "concilier l'intérêt financier avec celui des patients."

A ces citations pourtant déjà troublantes, Yvan Illich, ajoute (même référence) "La dynamique morbide de

l'entreprise médicale est sur le point d'être reconnue par le grand public. La fermeture des facultés de médecine dans la Révolution culturelle chinoise a représenté la première étape d'une prise de conscience." ... "La prochaine étape de cette prise de conscience se fera dans les pays développés où l'entreprise médicale contribue déjà au blocage général des institutions."

Sans faire l'analyse de ces biens de consommation, ni de leur valeur intrinsèque, ni des facteurs iatrogènes impliqués dans leur distribution, on peut s'attendre à ce que l'action politique et sociale fera perdre tout le caractère introuvable des services de santé. Si, l'on conservera toujours un certain respect pour la procédure clinique ou l'intervention proprement dite, ce sera davantage inspiré par le droit du patient à sa santé plutôt que par l'aveuglement de la confiance traditionnelle de celui que est chargé de la maintenir ou de la restaurer.

Au fond, les professions médicales sont poussées, et la profession dentaire peut-être davantage, dans un contexte d'économie, de rentabilité.

Parmi tous les sujets de discussion que peuvent inspirer ces propos, il en est un qui vient facilement à l'esprit: Comment concilier l'économie dentaire avec le professionisme que veulent garder les dentistes.

Dr. Robert Lambert
Rédacteur scientifique
de langue française

NOUVELLES BREVES: LE JOURNAL DE L'ACDQ

Le Dr. Claude Chicoine, directeur général de l'ACDQ, suggère la prudence aux dentistes face aux divers assujettissements de la profession. Les confrères auraient tout à gagner en lisant attentivement le Journal "dent pour dent" (novembre 1976). Pour le bénéfice de ceux qui l'ignorent du fait de leur absence au sein de l'Association, rappelons que l'ACDQ, depuis plusieurs mois, fait parvenir à ses

membres un journal mensuel. La collaboration des dentistes de la province, l'unité du corps dentaire face aux dimensions nouvelles sont devenus des impératifs dont la prise de conscience ne peut mieux s'exprimer, au départ, que par l'adhésion massive à l'ACDQ. Si l'association défend de son mieux les intérêts généraux il n'est que normal que la note soit partagée entre tous ceux qui en bénéficient.

Dans le sectarisme traditionnel du bureau privé, on imagine mal toutes les implications inhérentes au décloisonnement de la profession. C'est probablement un des motifs qui a incité l'ACDQ, à publier un journal d'abord destiné à l'information politico-sociale. C'était une nécessité. Le numéro auquel nous faisons allusion en est un exemple.

Dr. Robert Lambert

efde/feed
canadian
fund
for
dental
education
annual report
fonds
1976
canadien
pour
l'enseignement
dentaire
rapport annuel



chairman's message



I would be remiss if I did not commence this message with a most sincere expression of gratitude to all those who collectively have made operational contributions in 1976 the highest in history – approximately \$190,000. In particular and without detracting from other categories of donors, the dentists of Canada and their auxiliaries have seen fit to contribute a total of \$58,455, an increase of 31% over 1975. While there is considerable room for satisfaction on this and other income figures, there is little room for complacency because the Fund, like everything else, is caught in today's inflationary spiral. In the late seventies therefore, there appears to be an ongoing need to seek even more and larger contributions from both new and old sources if we are to accomplish our worthwhile objectives.

Assistance for dental education and research in 1976 was \$124,432, almost exactly the same as in the previous year. Particulars of grants paid and sources of income are shown in later sections of this report.

The past year has seen the move to Ottawa from Toronto of the headquarters of the Canadian Dental Association (CDA.) This move and its implications mark the beginning of a new era in the mutually beneficial and pleasant relationships between CFDE and CDA. Mention of these new relationships was made briefly in the 1975 message of the Chairman.

It has become apparent that there is some disquiet in some quarters with at least two aspects of these new arrangements and with their implications. These areas of disquiet are phrased here in the form of two questions as follows:

1. Why has CFDE not moved to Ottawa, particularly when CDA is having difficulty in renting space in its new building?
2. Why has CFDE not provided mortgage moneys to CDA for the second mortgage on its Ottawa building interest free or at a rate of interest lower than the "going" rate?

In answer to the first question, the Fund has not seen fit to move largely because of the considerably higher overhead which would be involved (a) in collecting the same or even less money annually, and (b) in discussing CFDE matters with the many qualified and informed personnel in the Toronto area. For example, about 90% of corporate giving to the Fund is obtained from Toronto based companies. Furthermore, and on average, there is almost daily face to face or telephone consultation between CFDE staff and those persons engaged in fund raising, dental education and research in Toronto and/or its environs. In saying all this, the Fund regretfully and clearly recognizes several disadvantages accruing to itself when it is *not* located alongside CDA. After spending many hours discussing both the pros and cons of an Ottawa move, the Trustees have retained a small CFDE office in Toronto. However, the final word has not been said on the subject by any means and various ways are continuing to be explored which may circumvent what are obvious difficulties and dilemmas.

To answer the second question, which includes more complicated issues, one has to return to 1972–1973 when the CFDE Capital Fund drive was launched with the approval of the then leadership of the CDA. In accordance with qualified professional advice the *official* CFDE position was (and remains) as follows:

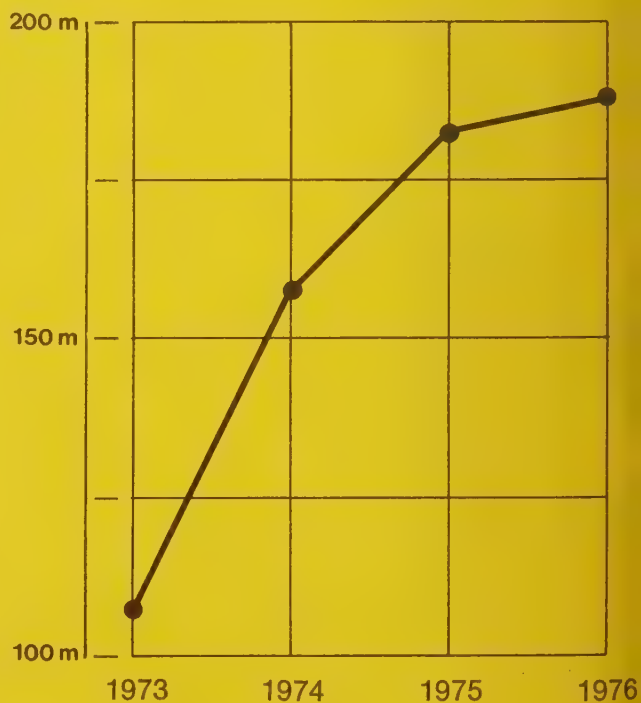
- (a) Any moneys so collected would be designated as a capital sum which could be lent to CDA for the financing of its new building in Ottawa.
- (b) Any such loan would not have a compulsory repayment clause nor would there be any penalty clause for early repayment.
- (c) The interest rate on any such loan would be established at the lowest possible level consistent with the CFDE "charitable organization" position vis-à-vis the Public Trustee of Ontario.
- (d) Any interest paid by CDA to CFDE in this connection would be used to continue the Fund's support of dental education and research in Canada within the limitations imposed by the CFDE Deed of Trust.

In some parts of Canada it seems that the official position of the Trustees regarding the Capital Fund and the reasons therefor unfortunately were not clearly defined or understood by some canvassers and/or donors. On a much more positive note, it should be mentioned that at the time of preparing this document, a joint CDA-CFDE ad hoc committee has been established to work out solutions to any existing problems. The committee has held one meeting at which it was felt considerable initial progress has been made.

I am optimistic that in next year's message I may be able to report a thoroughly satisfactory completion of the deliberations of the ad hoc committee.

J. W. Neilson, D.D.S.

Operational Income Revenus d'Exploitation



Message du président



Je ferais vraiment preuve de négligence si je ne commençais ce message par l'expression de la vive reconnaissance que nous éprouvons envers toutes les personnes grâce auxquelles nos revenus d'exploitation pour 1976 ont dépassé ceux de toutes les années précédentes. En effet, nous avons recueilli environ \$190,000. Sans pour cela dévaloriser diverses autres catégories de donateurs, les dentistes et les auxiliaires du Canada, en particulier, ont contribué un total de \$58,455, soit une augmentation de 31% en regard de 1975. Bien que cette somme, ainsi que les autres contributions que nous avons reçues, constituent une bonne raison de nous réjouir, nous n'avons pas de temps à perdre car ici, comme ailleurs, le Fonds est soumis aux poussées inflationnistes vertigineuses d'aujourd'hui. Dans le but de réaliser nos objectifs, nous serons donc tenus, au cours des prochaines années, de chercher à obtenir des contributions nombreuses et plus importantes encore, des dons en provenance de sources nouvelles ainsi que des sources anciennes.

En 1976, nous avons apporté à l'enseignement et à la recherche dentaires un appui financier de l'ordre de \$124,432, somme presque exactement identique à l'an dernier. Les subventions accordées et la liste des sources de nos revenus sont énumérées plus loin dans le rapport.

Le déménagement du siège social de l'Association dentaire canadienne (ADC), de Toronto à Ottawa, a eu lieu au cours de cette dernière année. Ce déplacement et les résultats qui en découlent marquent le début d'une nouvelle époque pour les rapports amicaux et réciproquement bénéfiques entre le FCED et l'ADC. Nous avons brièvement abordé ce sujet au Message du Président de 1975.

Manifestement, il existe dans certains milieux une perturbation en regard de deux aspects au moins, de ce nouvel arrangement. Je vais formuler ces domaines de perturbation en posant les deux questions suivantes:

1. Pourquoi le FCED ne se déplace-t-il pas à Ottawa, surtout lorsque l'on considère le fait que l'ADC éprouve des grandes difficultés à louer les espaces disponibles dans le nouvel immeuble?
2. Pourquoi le FCED n'a-t-il pas fourni à l'ADC les fonds nécessaires pour couvrir la deuxième hypothèque, exempts d'intérêt ou à taux d'intérêt inférieur au taux courant?

Pour la première question, le Fonds ne tient pas à déménager principalement en raison de l'augmentation considérable des frais généraux qu'il faudra déboursier pour (a) recueillir annuellement des contributions de même ordre ou peut-être inférieures et (b) discuter avec les nombreuses personnes compétentes et averties de la région de Toronto, d'affaires relatives au FCED. Par exemple, 90% des dons contribués au Fonds par des entreprises commerciales proviennent de compagnies dont le siège social est situé à Toronto. En outre, le personnel du FCED s'entretient plus ou moins tous les jours, personnellement ou au téléphone, avec les diverses personnes qui s'occupent de souscription de fonds ainsi que d'enseignement et de recherche dentaires à Toronto et dans les environs. Ceci dit, le Fonds admet avec regret que le fait de ne pas être tout à côté de l'ADC entraîne plusieurs inconvénients. A la suite de longues heures de discussion concernant le pour et le contre d'un déplacement à Ottawa, les fiduciaires du FCED ont décidé de conserver un petit bureau à Toronto. Toutefois, cette décision

n'est pas définitive et nous explorons toujours diverses possibilités en vue de résoudre des problèmes et des dilemmes évidents.

Pour répondre à la deuxième question, dont la teneur est plus complexe, il faut retourner à l'année 1972-73, alors que la campagne de souscription de fonds de capital du FCED était lancée avec l'approbation des dirigeants d'alors de l'ADC. Conformément aux conseils de professionnels qualifiés, l'attitude officielle de FCED était alors (comme aujourd'hui) la suivante:

- (a) Tous les fonds ainsi recueillis seraient désignés à titre de capital que le FCED pourrait prêter à l'ADC en vue de financer la construction de son nouvel immeuble à Ottawa.
- (b) Un tel prêt ne comporterait pas de clause de remboursement obligatoire et il n'y aurait pas non plus de pénalité dans le cas d'un remboursement anticipé.
- (c) Le taux d'intérêt applicable à ce prêt serait fixé au plus bas taux possible conformément au statut d'"oeuvre de bienfaisance" du FCED vis-à-vis du Dépositaire de la Province de l'Ontario.
- (d) Tout intérêt versé par l'ADC au FCED à cet égard serait destiné à la continuation de l'appui apporté par le Fonds à l'enseignement et à la recherche dentaires au Canada, dans le cadre des restrictions imposées par l'acte de fiducie du FCED.

Dans certaines régions du Canada, il semble que l'attitude officielle des fiduciaires en regard du Fonds de capital ainsi que des raisons motivant cette attitude, n'aient malheureusement pas été nettement définies ni comprises par tous les collecteurs de fonds et donateurs. Toutefois, dans une optique plus positive, il faut ajouter qu'au moment de la préparation du présent document, un comité ad hoc conjoint de l'ADC/FCED a été créé pour essayer de résoudre tous les problèmes actuels. Ce comité s'est réuni une fois et l'on estime que d'importants progrès préliminaires ont déjà été faits.

Je suis très confiant que lors de mon message de l'an prochain, je pourrai vous faire part des résultats entièrement satisfaisants qui auront été obtenus grâce aux délibérations de ce comité ad hoc.

J. W. Neilson, D.D.S.



expanding dimensions

TO MEET
THE CRITICAL NEEDS
IN DENTAL EDUCATION
AND RESEARCH



Who supports the Canadian Fund for Dental Education

Dentists . . . new graduates and recent retirees . . . families and neighbours . . . employees of dental supply firms . . . patients . . . dental faculty members and students . . . dental hygienists . . . dental laboratory owners . . . business executives . . . dental nurses and assistants . . . dental dealers and manufacturers – *people who care about the future of dental health in this country.*

Income in 1976 – Dentists lead the way

Personal contributions from dentists were the Fund's largest single source of support in 1976 and were a major factor in increasing CFDE's operational income to the highest level in history. Every province joined in the advance and 189 dentists became honour members by contributing \$100.00 or more, an increase of 25%. Most encouraging of all was the number of new supporters – 229.

Dental hygienists also helped with gifts of over a thousand dollars – a new record.

Business and industry, following the example set by the profession, also increased its support to a record level of \$57,000. Many companies generously increased their annual contribution and eight gave for the first time.

Foundation support declined by over \$15,000. Early in 1977, however, a major award of \$46,000 was approved by the Toronto Hospital for Sick Children Foundation.

A most welcome endowment fund of \$5,000 was established in 1976 by the Crown and Bridge Study Club of the Toronto Academy of Dentistry. Annual earnings of this fund will help support CFDE's programs.

An Investment in People

Almost half of CFDE's grants in 1976 were awarded to people who will directly influence the profession's future. Fellowships were awarded to fourteen dentists and four dental hygienists who, in a year or two, will be teaching in the nation's schools.

All applications for support are thoroughly screened and

only those individuals who show promise of making a significant contribution to dental education are awarded fellowships.

As evidence of this careful selection process, our records show that fellowship recipients over the years now occupy important posts as teachers, researchers, chairmen and heads of dental school departments and directors of dental hygiene programs in dental schools throughout Canada.

The Fund also provides an opportunity for established teachers in Canadian faculties of dentistry to refresh and to extend their knowledge in any field of dental education and research. To this end a fellowship has been awarded annually since 1971 with resultant benefits to faculties and students.

Dental Research is not neglected

Obviously an essential health profession must constantly search for improved treatment procedures and better methods of delivering dental care.

CFDE recognizes this need by financing promising research projects. For example, the 9th Biennial Conference on Dental Research and Education was funded by CFDE in 1976. The research sessions dealt with "Dental Caries and Periodontal Disease" while the education component explored "Pain and Apprehension Control in Dentistry". This meeting provided a unique opportunity for leading researchers from all parts of Canada to come together in a forum designed to advance dental research and knowledge.

A Record of Achievement

As recently stated by Fund Trustee Dr. James A. Guest: "Since 1963 voluntary gifts have enabled CFDE to invest over three quarters of a million dollars in dental education and research programs that in some measure have directly or indirectly benefited every dental school, student and practising dentist in Canada. Obviously the public has benefited as a result."

projects already approved for funding in 1977

Congress on Cleft Palate and Other Craniofacial Anomalies

To present new information on concepts of management, techniques of treatment and development of research ideas.

Teaching Conference on "Physical Diagnosis in Dental Education"

To study medical/legal problems in relation to dental practice.

Dental Research at the University of Toronto

To provide clinical benefits in the treatment of congenital malformations and mandibular fractures.

projets dont le financement est déjà approuvé pour 1977

Congrès sur les divisions palatines et autres anomalies crânio-faciales

Présentation de nouvelles données concernant le traitement, les méthodes thérapeutiques et le développement de concepts de recherche.

Conférence d'enseignement sur le "Diagnostic physique dans le domaine de l'enseignement dentaire"

Etude de problèmes médicaux/légaux en regard de l'exercice dentaire.

Recherche dentaire à l'Université de Toronto

Trouver des solutions cliniques de perfectionnement du traitement de malformations congénitales et de fractures mandibulaires.

optique en xpansion

POUR FAIRE FACE AUX
BESOINS URGENTS DES DOMAINES DE L'ENSEIGNEMENT
ET DE LA RECHERCHE DENTAIRES

Où provient l'appui financier destiné au Fonds canadien pour l'enseignement dentaire?

Les dentistes... des jeunes diplômés et de dentistes à la retraite... de la famille et des voisins... d'employés des entreprises de fournitures dentaires... de patients... des membres des facultés dentaires et d'étudiants... des hygiénistes dentaires... de cadres... de propriétaires de laboratoires dentaires... d'infirmières et d'assistantes dentaires... de négociants et de fabricants de produits dentaires – *de tous ceux qui se soucient de l'avenir de la santé dentaire dans notre pays.*

Revenus en 1976 – Les dentistes se placent en tête de file

Les contributions personnelles faites par les dentistes représentaient, en 1976, la source individuelle la plus considérable d'appui financier au FCED; elles constituaient l'un des principaux facteurs contribuant à l'augmentation des revenus d'exploitation du FCED, qui ont atteint des niveaux plus élevés que jamais. Toutes les provinces ont contribué à cette augmentation; 189 dentistes se sont élevés au rang de "membres d'honneur" (don de \$100 ou plus), soit une augmentation de 25%. Même encore plus encourageant, le nombre de *nouveaux* membres de soutien s'élève à 229.

Les hygiénistes dentaires ont contribué des dons qui dépassaient un millier de dollars – nouveau chiffre record.

Les entreprises commerciales et industrielles, suivant l'exemple de la profession, ont également battu tous les records et elles ont contribué \$57.000. De nombreuses compagnies ont généreusement augmenté leurs dons, alors que huit entreprises contribuaient au Fonds pour la première fois.

L'appui provenant des Fondations a diminué de plus de \$15.000. Toutefois, au début de 1977, une importante subvention s'élevant à \$46.000 a été approuvée par la Fondation de l'Hôpital pour les enfants malades à Toronto.

Un fonds de dotation fort apprécié a été créé en 1976 par le Crown and Bridge Study Club de la Toronto Academy of Dentistry. Les revenus annuels provenant de ce fonds aideront à subventionner les programmes du FCED.

Un investissement dont bénéficie le public

Presque la moitié des subventions octroyées en 1976 ont été accordées à des personnes qui ont une influence directe sur l'avenir de la profession. Quatorze dentistes et quatre hygiénistes dentaires ont obtenu des bourses et dans un an ou deux, ces professionnels enseigneront dans une des écoles du pays.

Toutes les demandes d'appui financier sont étudiées à fond et seules les personnes qui promettent de faire une importante contribution à l'éducation dentaire reçoivent des bourses.

Pour bien prouver combien cette méthode de sélection est efficace, notre bilan indique que les bénéficiaires de bourses au cours des années passées occupent aujourd'hui d'importants postes d'enseignants, de chercheurs, de chefs de départements d'écoles dentaires et de directeurs de programmes d'hygiène dentaire dans les facultés du Canada.

Le fonds procure également une occasion aux enseignants des facultés dentaires canadiennes de perfectionner et d'approfondir leurs connaissances dans le domaine de l'éducation et de la recherche dentaires. Une

bourse est octroyée à cette fin tous les ans depuis 1971 et les facultés ainsi que les étudiants profitent de ce don.

La recherche dentaire n'est pas négligée

De toute évidence, une profession essentielle du domaine de la santé doit sans cesse rechercher le perfectionnement de ses procédures de traitement et l'amélioration de ses services.

Le FCED fait face à ce besoin au moyen de financement de projets de recherche de mérite. Par exemple, le 9ème Conférence biennale sur la recherche et l'enseignement dentaires était subventionnée, en 1976, par le FCED. Pour le domaine de la recherche, les séances traitaient de "caries dentaires et maladies parodontaires" alors que celui de l'enseignement explorait la "douleur et suppression d'appréhension au cours de l'exercice dentaire". Cette assemblée présentait aux principaux chercheurs du Canada entier l'occasion unique de tenir un forum conçu à approfondir les connaissances et les recherches dentaires.

Réalisations

Le Dr James A. Guest, fiduciaire du Fonds, a récemment déclaré: "Depuis 1963, les contributions bénévoles ont permis au FCED d'investir trois-quarts de millions de dollars dans des programmes d'enseignement et de recherche dentaires qui ont, directement ou indirectement, eu une influence bénéfique sur toutes les écoles dentaires, tous les étudiants et tous les dentistes exerçant au Canada. Conclusion manifeste: c'est le public qui a bénéficié de notre appui."



financial highlights of 1976 faits financiers marquants

Full details regarding CFDE's programs and projects as well as its financial operations are available on request.

For more information and a copy of the auditor's report write to:

Chairman of the Board of Trustees
Canadian Fund for Dental Education
Suite 205, 44 Eglinton Avenue West
Toronto, Ontario M4R 1A1

En plus de l'exercice financier, toutes les particularités relatives aux programmes et aux projets du FCED seront aussi fournies sur demande.

Pour de plus amples renseignements et une copie du rapport du vérificateur comptable s'adresser à:
Monsieur le président du Conseil de fiducie
Fonds canadien pour l'enseignement dentaire
Suite 205, 44 Eglinton Avenue West
Toronto, Ontario M4R 1A1

Sources of support / Sources des dons income 1976 / revenu 1976

Dental Profession Profession dentaire	\$ 58,455	30%
Business and Industry Commerce et industrie	\$ 56,943	29%
Investment and Sundry Income Revenus de placements et de sources diverses	\$ 47,149	24%
Foundations Fondations	\$ 14,848	8%
Canadian Dental Association and Other Dental Organizations L'Association dentaire canadienne et autres associations dentaires	\$ 12,217	6%
OPERATIONAL INCOME / REVENUS D'EXPLOITATION	\$189,612	97%
Gifts to Capital and Endowment Funds Dons aux fonds de capital et de dotation	\$ 7,200	3%
TOTAL INCOME / REVENU TOTAL	\$196,812	100%

1976 operating expenses vs. total income 1976 frais d'exploitation au regard du revenu total

Management and Fund Raising Administration et campagne de souscription	\$ 54,349	27%
Program Services Services relatifs aux programmes	\$ 15,098	8%
TOTAL	\$ 69,447	35%

How your contributions helped dental education and research

Voici comment l'enseignement et la recherche dentaires ont bénéficié grâce à vos contributions

1976 awards/ 1976 subventions

Teacher Training Fellowships (Dentists and Dental Hygienists)	\$ 55,172	44%
Bourses de formation en enseignement (Dentistes et Hygiénistes dentaires)		
Graduate and Undergraduate Accreditation Surveys	\$ 13,975	11%
Enquêtes relatives à l'agrément des diplômés et des sous-diplômés		
Research Project – University of Toronto	\$ 12,765	10%
Projet de recherche – Université de Toronto		
Biennial Dental Research Workers Conference	\$ 10,000	8%
Conférence biennale de la recherche dentaire		
Grants to Dental Schools	\$ 10,000	8%
Subventions aux écoles dentaires		
Student Table Clinics and Conferences	\$ 9,140	7%
Conférences et cliniques de tables étudiantes		
Dental Teaching Conference and Workshop	\$ 5,650	4%
Conférence et atelier sur l'enseignement dentaire		
Lorne E. MacLachlan Endowment – Teacher Training Awards	\$ 4,680	4%
Dotation Lorne E. MacLachlan – Bourses pour la formation d'enseignants		
Sundry Awards	\$ 3,050	2%
Octrois divers		
	\$124,432	98%
Invested in Income Producing Securities	\$ 2,933	2%
Placements dans des valeurs de revenu		
TOTAL	\$127,365	100%

cfde assistance for dental education and research

contribution du fced à l'enseignement et à la recherche dentaires

'73		\$ 76,812
'74		99,037
'75		124,622
'76		124,432
'77		\$155,000 (projected / projeté)

1976 HONOUR ROLL OF CONTRIBUTORS FROM DENTAL ORGANIZATIONS, BUSINESS AND INDUSTRY

The Canadian Fund for Dental Education wishes to pay tribute to the following organizations which contributed \$100 or more to the Fund in 1976. Most of those listed have contributed annually to CFDE for several years and their continuing support is deeply appreciated. Those organizations preceded by (●) have supported CFDE's efforts in behalf of dental education and dental care for ten years or more.

Although individual names are not listed, the Fund also wishes to express grateful appreciation for the many smaller gifts received from various organizations.

TABLEAU D'HONNEUR 1976 DES DONATEURS EN PROVENANCE DES ORGANISMES DENTAIRES, DES MAISONS D'AFFAIRES ET DES INDUSTRIES

Les responsables du Fonds canadien pour l'enseignement dentaire désirent rendre hommage aux organismes suivants qui ont contribué \$100 ou plus au Fonds en 1976. La plupart des donateurs inscrits versent une contribution annuelle au FCED depuis plusieurs années, et leur appui soutenu est vivement apprécié. Les organismes précédés de (●) appuient l'oeuvre du FCED au bénéfice de l'enseignement dentaire et des soins dentaires depuis dix années ou plus.

Bien que les noms individuels ne soient pas cités, les responsables du Fonds désirent exprimer leur appréciation reconnaissante pour les nombreux dons plus modestes provenant de divers organismes.

FOUNDING MEMBERS / MEMBRES ORIGINAIRES (\$10,000 and over / et plus)

- Kellogg, W. K. Foundation, Battle Creek, Mich.

PATRONS / COMMANDITAIRES (\$5,000 - \$9,999)

- Caulk, L. D. Company of Canada, Toronto, Ont.
- Colgate-Palmolive Company, Toronto, Ont.
- Crown & Bridge Study Club, Academy of Dentistry, Toronto, Ont.
- Dentsply Canada Limited, Toronto, Ont.
- Procter & Gamble Company of Canada Limited, Toronto, Ont.

BENEFACTORS / BIENFAITEURS (\$3,500 - \$4,999)

- Ash Temple Limited, Toronto, Ont.
- Denco, Toronto, Ont.

SUSTAINING MEMBERS / MEMBRES DE SOUTIEN (\$2,000 - \$3,499)

- CNA Assurance Company, Toronto, Ont.
- Cox Systems Limited, Stoney Creek, Ont.
- Medi-Dent Service Limited, Hamilton, Ont.
- Pelton & Crane Company, Charlotte, N.C.
- Warner-Lambert Canada Limited, Toronto, Ont.
- Wrigley, Wm. Jr. Company Limited, Toronto, Ont.

SUPPORTING MEMBERS / COLLABORATEURS (\$1,000 - \$1,999)

- A-Dec Inc., Newberg, Oregon
- Alberta Dental Association, Edmonton, Alta.
- Canadian Dental Hygienists' Association
- Canadian Dental Service Plans Inc., Toronto, Ont.
- Canadian Dental Supply Limited, Vancouver, B.C.
- Dépôt Dentaire (Canada) Limitée, Montréal, Qué.
- Healthco (Canada) Limited, Montreal, Que.
- Kerr Canada, Toronto, Ont.
- National Refining Company Limited, Toronto, Ont.
- Nova Scotia Dental Association, Halifax, N.S.
- Ontario Dental Association, Toronto, Ont.
- Royal College of Dental Surgeons of Ontario, Toronto, Ont.

CONTRIBUTING MEMBERS / DONATEURS (\$500 - \$999)

- Astra Chemicals Limited, Mississauga, Ont.
- Butler, John O. Company, Montreal, Que.
- Canadian Dental Association, Ottawa, Ont.
- Coe Laboratories Inc., Chicago, Ill.
- College of Dental Surgeons of British Columbia, Vancouver, B.C.
- College of Dental Surgeons of Saskatchewan, Saskatoon, Sask.
- General Electric Company, Milwaukee, Wisc.
- Great-West Life Assurance Company, Winnipeg, Man.
- Hiram Walker & Sons Limited, Toronto, Ont.
- International College of Dentists, Canadian Section, Toronto, Ont.
- Johnson & Johnson Limited, Montreal, Que.
- Labatt's Ontario Breweries Limited, London, Ont.
- Manitoba Dental Association, Winnipeg, Man.
- Novocol Chemical Manufacturing Company of Canada Limited, Toronto, Ont.
- White, S. S. Dental Division, Etobicoke, Ont.

SUBSCRIBERS / ADHERENTS (\$100 - \$499)

- Alberta Dental Hygienists' Association, Edmonton, Alta.
- Alpha Omega Foundation Inc., New York, N.Y.
- Amalgamated Dental Company (Canada) Limited, Niagara Falls, Ont.
- Association des Chirurgiens Dentistes du Québec, Montréal, Qué.
- Beavers Dental Products Limited, Morrisburg, Ont.
- Beverly Nursing Home Limited, Calgary, Alta.
- British Columbia Dental Hygienists' Association, Vancouver, B.C.
- Canada Dental Supply Company Limited, Montreal, Que.
- Canadian Academy of Restorative Dentistry
- Canadian Society of Oral Surgeons
- Canadian Society of Public Health Dentists
- Central Dental Limited, Toronto, Ont.
- CML - Medical Leasing Service, Toronto, Ont.
- Coca-Cola Limited, Toronto, Ont.
- Columbia Dentoform Corporation, New York, N.Y.
- Cook-Waite Laboratories, Aurora, Ont.
- Den-Tal-Ez Manufacturing Company, Des Moines, Iowa
- Dr. Ben Claman Fund, Winnipeg, Man.
- Frosst, Charles E. & Company, Pointe Claire-Dorval, Que.
- Greene Dental Products Inc., Aurora, Ont.
- Holey Molars, Calgary Dental Jazz Society, Calgary, Alta.
- Hu-Friedy, Chicago, Ill.
- Hygienic Dental Manufacturing Company, Akron, Ohio
- Imperial Life Assurance Company of Canada, Toronto, Ont.
- Inter-Unitek Canada Limited, Toronto, Ont.
- Jelenko Dental Health Products, New Rochelle, N.Y.
- Kodak Canada Limited, Toronto, Ont.
- Laurier Life Insurance Company, Toronto, Ont.
- Lever Detergents Limited, Toronto, Ont.
- Lux & Zwingenberger Limited, Toronto, Ont.
- McGill University, Faculty of Dentistry, Montreal, Que.
- MDT Corporation, Gardena, Cal.
- Modular & Custom Cabinets Limited, Concord, Ont.
- Moncton Dental Society, Moncton, N.B.
- Myerson Inter-American Corporation, Cambridge, Mass.
- New Brunswick Dental Society, Moncton, N.B.
- Ontario Dental Hygienists' Association, Toronto, Ont.
- Pfingst & Company Inc., New York, N.Y.
- Phi Kappa Pi Alumni Association, Halifax, N.S.
- Philips Electronics Limited, Toronto, Ont.
- Posen & Furie Dental Laboratories Limited, Toronto, Ont.
- Regina & District Dental Society, Regina, Sask.
- Rocky Mountain Orthodontics Canada Limited, Toronto, Ont.
- Royal Bank of Canada, Toronto, Ont.
- Royal Trust Company, Toronto, Ont.
- Shaw Laboratories Limited, Toronto, Ont.
- Shofu Dental Corporation, Menlo Park, Cal.
- Siemens Canada Limited, Pointe Claire, Que.
- Surrey Memorial Hospital, Dental Staff, Surrey, B.C.
- Weil Dental Supplies Limited, Toronto, Ont.
- Whaledent International, New York, N.Y.
- Williams Gold Refining Company of Canada Limited, Fort Erie, Ont.
- Wright Dental Canada Limited, Richmond Hill, Ont.

1976 HONOUR ROLL OF INDIVIDUAL CONTRIBUTORS

The CFDE trustees wish to pay tribute to the following individuals who contributed to the Fund in 1976.
(*) denotes an Honour Member – one who gave \$100 or more.

TABLEAU D'HONNEUR 1976 DES DONATEURS INDIVIDUELS

Les fiduciaires du FCED désirent rendre hommage aux personnes suivantes qui ont contribué au Fonds en 1976.
(*) indique un membre d'honneur, c'est-à-dire une personne qui a versé \$100 ou plus.

DENTAL PROFESSION / PROFESSION DENTAIRE

**NEWFOUNDLAND
TERRE-NEUVE**
Butler, D. G., St. John's
Collinson, P. S., Glovertown
Daly, C. P., St. John's
Furlong, R. F., St. John's
Giberson, I. C., Deer Lake
Goodwin, W. L., Harbour Grace
Goudie, W., Stephenville
Gushue, T. J., Grand Falls
Hatch, G. W., Corner Brook
Hewitt, G. M. W., Gander
Hunt, B. D., Lewisporte
Jackman, D. J., Grand Falls
Jackman, L. L., Grand Falls
Kazda, I. K., St. Joseph's
King, J. J., St. John's
Linfield, A. J., Corner Brook
MacLeod, R. W., Corner Brook
Manning, B. H., Lumsden
McNally, A. E., Holyrood
O'Brien, P. C. E., St. John's
O'Driscoll, W. J., St. John's
Parsons, E. K., Labrador City
Peters, D. K., St. John's
Quigley, R. F., St. John's
Richards, R. F., Clarenville
Sexton, R. D., Corner Brook
Swan, J. H. S. D., Clarenville
Trend, J. P., Grand Falls

**PRINCE EDWARD ISLAND
ÎLE DU PRINCE-ÉDOUARD**
Doiron, J. A., Summerside
Dombowsky, L., Summerside
Duffy, L. I., Charlottetown
Kearney, B. P., Charlottetown
MacIntyre, J. P., Charlottetown
MacLean, A. L., Summerside
MacPhee, J. G., Summerside
Porter, P. J., Charlottetown

**NOVA SCOTIA
NOUVELLE ÉCOSSE**
Anderson, N. B., Lunenburg
Bagnall, S. G., Halifax
Bain, C. A., Halifax
Baird, D. G., Halifax
Bannerman, R. A., Middleton
Bennett, I. C., Halifax
Canning, R. G., Sydney River
Chaytor, D. V., Halifax
Chernin, S., Halifax
Christie, P. S., Halifax
Conrad, G. M. D., Dartmouth
Davis, B. C., Halifax
Davis, R. W., Truro
Eaton, D. C., Halifax
Eisner, D. A., Halifax
Ervin, A. H., Halifax
Findlay, J., Halifax
Hann, H. J., Halifax
Hannigan, E. J., Halifax
Hoffman, A. E., Halifax
Hogan, P. C., Lower Sackville
Hurst, M. M., Antigonish
Jardine, E. W., Sydney
Jensen, G. M., Halifax
Johnston, B. G., Truro
Kerr, K. M., Bedford
Layton, N. J., Truro

Layton, N. M., Truro
MacCormack, H. P., Truro
Macdonald, B. L., Sydney
MacDonald, E. S., Antigonish
Macintosh, D. C. T., Halifax
MacLean, J. A., New Glasgow
MacLellan, A. J., Antigonish
McLean, J. D., Halifax
Merritt, J. E., Halifax
Miller, J. W., Dartmouth
Morrison, E. S., Halifax
Pentz, R. W., Armdale
Raddall, T. H., Liverpool
Rawson, D. E., Halifax
Sandham, B. W., Port Hawkesbury
*Shaffner, V. B., Halifax
Spracklin, T. E., Halifax
Stewart, D. A., Windsor
Taylor, R. H., Wolfville
Thompson, W. E., Truro
Vogan, W. I., Halifax
*Wintermans, T. A., Bedford
Zwicker, G. S., Halifax

**NEW BRUNSWICK
NOUVEAU BRUNSWICK**
Alain, J. J. E., Bathurst
Aucoin, R., Edmundston
Berube, A. G., Campbellton
*Bissett, R. R., Riverview Heights
Blackmer, J. G., Fredericton
Brown, M. N., Saint John
Caverhill, P. L., Woodstock
Chouinard, J. A., Edmundston
Cormier, G. A., Moncton
*Cormier, P. E., Moncton
Crompton, M. J., Moncton
DeWare, R. B., Moncton
Dowd, J. T., Moncton
Edgecombe, J. F., Saint John
Feeney, D. W., Fredericton
Gaudet, F. J. A., Moncton
Horsman, M. F., Tracadie
LeBlanc, C. S., Moncton
Léger, E. J., Bathurst
Léger, R. R., Moncton
*Manson, P. F., Fredericton
McMullin, R. E., Fredericton
*Mulligan, W. O., Saint John
Murray, R. A., Moncton
Orser, G. G., Fredericton
Ramsay, G. L., Saint John
Rector, W. R., Hampton
*Richardson, M. M., Fredericton
Rooney, J. C., Moncton
Steeves, D. C., Moncton
Williams, D. E., Moncton
Zed, L. G., Saint John

QUEBEC
Ahn, D., Montreal
Ajemian, G. K., Beaconsfield
Allard, P. Y., Montréal-Nord
Allard, R., Pincourt
Albert, R. H., Montreal
*Ambrose, E. R., Montreal
*André, Y., Montreal
Androutsos, E. A., Montreal
Atallah, L., Montreal
Aziz, M. P., Beaconsfield
Barolet, R. Y., Ste-Foy
*Beaudet, C. A., Montréal
Beaulieu, C., St-Laurent
Bégin, J., Montréal
Beiger, G. (Gabriela), Montreal
Beiger, G. (Gregory), Montreal
Belisle, G., Montréal
Bentley, K. C., Montreal
*Bernier, L., Sillery
Bertrand, J. L., Dorval
Bock, J. G., Montréal
Boileau, J. C. F., Longueuil
Boudreau, N., Matane

Breault, C., Ste-Rose
Bregman, N. B., Chomedey, Laval
Bridger, D. V., Montreal
Brisson, M., St-Esprit
Brodeur, J., Granby
*Brouillet, H., Montréal
Bussière, J., Ste-Foy
Capelle, M., Montreal
Caza, H., Hull
Chaput, C., Louiseville
Charette, R., Montréal
Chesnay, G., Montréal
Chicoine, C. R., Montréal
Chokren, R. R., Montréal
Chrétien, R. J., Campbell's Bay
Claener, J. A., Montreal
*Cloutier, F., St-Laurent
Couture, L., Dollard des Ormeaux
Couture, P., Trois-Rivières
Covit, C., St-Laurent
Cramer, L. L., Montreal
Crowley, F. A., Longueuil
Crutchfield, C. B., Quebec
Daigle, L., Montréal
Dalpé, J. L. A., Montréal
David, R. J., Montreal
Demers, M., Ste-Foy
DeMontigny, G., Montréal
Desautels, P., Montréal
Deslauriers, R., St-Hyacinthe
*DeVries, J., Montreal
Dion, J. A. R. M., Sillery
Dorion, R. B. J., Montreal
Dubé, P., St-Denis-sur-Richelieu
Ducharme, D., Montréal
Dufresne, R., Montréal
Dundass, G. M., Montreal
Edmison, R. S., Montreal
Eidinger, M., Montreal
Erick, R. M., Pointe Claire
Fellows, E. A., Montreal
*Ferland, P. G., Pierrefonds
Fong Chong, J. R., Montreal
*Fortin, J. M., Duvernay, Laval
Gagnon, M., St-Jérôme
Gampel, P. C., Westmount
Gaudet, R. R., Dorval
Gaudreault, P., Ste-Foy
Gauthier, L., Ste-Foy
Girard, A., Chicoutimi
Gitnick, P. J., Montreal
Godin, C., Trois-Rivières
Goodyer, V., Québec
Gosselin, C. E., Sherbrooke
Goulet, R., St-Jérôme
Gouroff, S., Pointe Claire
Granger, J. N., St-Gabriel
Griffiths, V. B., Pointe Claire
Grossman, R. A., Montreal
Gussow, W. B., Pointe Claire
Hale, G. K., St-Lambert
Harvey, D. R., Montreal
Harvey, N., Cowansville
Harvey, R. F., Montreal
*Hasegawa, J. S., Montreal
Hirsh, H., Montreal
Hoffer, A., Montreal
Honiges, J., St-Laurent
Houle, J. R., Québec
Huot, A., Montréal
Israel, A. S., Montreal
Jacques, G., Chicoutimi
Johnston, G. M., Pointe Claire
Jones, R. G., Montreal
*Katz, I. M., Montreal
Kehoe, J. E., Pointe Claire
Kent, L. E. Jr., Westmount
LaBerge, G., Québec
LaFlèche, R. G., Ste-Foy
Lafleur, Y., St-Hyacinthe
Lafontaine, M., Drummondville
LaHaye, G., La Salle
Lalonde, C. G., Montréal

Lamb, R. T., Montreal
Langlois, A. A., Québec
Langlois, R., Québec
Lapointe, D., Valleyfield
Laporte, J. L., Montréal
Larocque, J., Val d'Or
Larouche, A., Longueuil
Lauzière, J. A., Hull
Lavallée, J. N., Longueuil
Lavallée, R., Mont-Joli
Lazare, M., Pointe Claire
Leblanc, A., Montréal-Nord
LeBlanc, J. J., Arvida
Leduc, F., Wakefield
Leith, A., Montreal
Leith, D. R., Lachine
Lemieux, D., Ste-Geneviève
Lépine, L., Montréal
L'Espérance, J. C., Montréal
Levitt, H. L., Montreal
Lubin, I., Montreal
Crowley, F. A., Longueuil
MacDougall, G., Longueuil
MacKay, G., Montréal-Nord
Maliska, J., Montreal
Margolese, I., Montreal
Marino, A., Forestville
Marsolais, P., L'Assomption
Massicotte, G., Sillery
McCarthy, J. J., Montreal
McFadden, V., St-Jérôme
*McLeod, J. A., Lachine
McMullan, J. F., Montreal
Meunier, R., St-Bruno
Michaud, M., Montréal
Millar, E. P., Montreal
Miller, S. I., Pointe Claire
Minville, P. R., Beauport
Monette, J. R., Montreal
Montminy, D., Greenfield Park
Morency, R., Montréal
Munro, D. J., Montreal
Muroff, F. I., Montreal
Mussells, H. L., Montreal
*Nadeau, J. R., Montreal
Nappert, R., Victoriaville
Northway, W. M., St-Bruno
Nyeste, Z. B., Montreal
Ostro, E., Montreal
Padveen, J. W., Montreal
Paradis, R., Rouyn
Parent, B., Montréal
Pater, K., Montreal
Pelletier, R., St-Zotique
Pesner, I. N., Montreal
Pinchuk, M., Montreal
Poitras, J. B., Montmagny
Poznak, G., Montreal
Provost, A., Chomedey, Laval
Ptack, H., Montreal
Puchinger, L., Westmount
*Quintal, D., Pointe-aux-Trembles
Raymond, A., Montréal
Rennert, M. D., Montreal
Richard, D., Sept-Îles
Riendeau, O., Beloeil
*Rivest, J. L., Villeneuve
Robichaud, H. M., Montréal
Rogers, M. A., Montreal
Rondeau, A., Montréal
Rosen, H., Montreal
Rosen, L. J., Montreal
Rowlands, J. A., Montreal
Rudick, G. S., Montreal
Schneider, G., Montreal
Schwartz, L., Montreal
Schwartz, S. R., Montreal
Sénéchal, R., Pincourt
Shizgal, D. T., Montreal
Silver, I. I., Montreal
Silver, S., Montreal
Simard, P., Ste-Foy
Simard, Y., Louiseville
Spira, A., Montreal
Staples, P. C., Montreal-West

*Stutman, P. W., Montreal
Szikman, M., Montreal
Talbot, R., Québec
Tanguay, B., Ste-Foy
Tougas, G., Montréal
Trépanier, M. R., Farnham
Trépanier, O., Farnham
Turpin, G., Brossard
Vachon, C., Montréal
Vosberg, C., Montreal
Vouligny, V., Boucherville
*Wainberg, A. S., Montreal
Wechsler, M. H., Montreal
Whitehead, J. W., Mount-Royal
Wlekliński, M. A., Dorval
Zimakas, W. B., Montreal

ONTARIO
Ackerman, J. E., Toronto
*Adams, R. W. C., Cambridge
Agate, T. E., Beamsville
Albert, R., Ottawa
Alexander, J. A., Ottawa
Allen, D. R., Port Elgin
Allison, G. M., Stoney Creek
Anderson, F. H., Collingwood
Anderson, N. F., Sarnia
Angelov, K., Toronto
Anglin, W. W., Stirling
Anker, G. S., Toronto
Ante, E. H., Toronto
Armstrong, J. D., Owen Sound
Armstrong, L. W., Kenora
Armstrong, W. K., Alliston
*Asling, J. A., Hanover
Asling, P. M., Uxbridge
Aurlick, N. W., Toronto
Austin, E. B., Delhi
Babcock, J. K., Cambridge
*Bacher, D. B., Guelph
Baggs, R. B., Scarborough
Baird, E. G., Elmira
Band, B. M., Scarborough
Bannister, L. G., Niagara-on-the-Lake
Banting, W. A., Burlington
Barlow, T. J., Hamilton
Barnett, M. C., Mitchell
Barr, R. A., Ottawa
Bartalos, R. S., Ancaster
Bassett, B. J., Willowdale
Bastien, V. G., Toronto
*Beagrie, G. S., Toronto
Beauprie, D. J., Deep River
Beck, P. M., Toronto
Bell, D. E., Ottawa
Bembeneck, J. J., Burlington
Berman, J., Ottawa
Bertrand, J. G., Ottawa
Bimm, J. A., Peterborough
*Bing, H. E., Cobourg
Black, W. R., Aurora
Blackstein, B., Niagara Falls
*Blumenthal, A. M., Windsor
Boadway, D. N., Aylmer
Boccia, A. D., Toronto
Bodnar, F. A., Burlington
Bodnar, M. P., Watford
Boissonnault, H. R., Sudbury
Boudarchuk, A., St. Catharines
Boose, R. O., Watdown
Boucher, G. B., Penetanguishene
Boulos, N. N., Toronto
Bower, D. G., North Bay
Bowles, G. S., Thunder Bay
Boyd, S. H., Oakville
*Boyko, A., Hamilton
Bradley, G. G., Picton
Brake, J. J., Scarborough
*Brandon, R. A., Marathon
Braund, J. E., Toronto
Bray, G. R., Meaford
Breau, G. J., Ottawa
Breglia, A. J., Toronto
*Bridges, J. A., Ottawa
Brockhouse, I. B., Ancaster
Brooks, C. E., Toronto
Brown, D. F., Petrolia
Brown, M., Toronto
Brown, R. G., Brampton
Bruce, W. G., Kincardine
Bruce, W. R., Kincardine
Budolowski, L. A., Windsor
Buder, H. E., Kitchener
Budzinski, W., Alliston
Bunt, R. D. H., Trenton
Burgess, G. E., Petrolia
Burgess, R. C., Markham
Burgman, G. E., Niagara Falls
Burgman, G. W., Kirkland Lake
Burgman, W. A., Cambridge
*Burman, D. G., Toronto
Butcher, E. C., Port Colborne
Bye, M. N., Owen Sound
Calder, I. F., Brockville
Campbell, J. F., Toronto

Campbell, J. M., Chatham
Capel, G. E., Islington
Capogreco, V. E., Ottawa
Cappa, C. F., London
Carpenter, I. P. D., Ottawa
Carrier, L., Ottawa
Carroll, R. H., Orillia
Casey, B. B., Carleton Place
Cattran, C. F., Bowmanville
Cavanagh, W. D., Toronto
Chalifoux, P., Sudbury
*Chalmers, J. A., Toronto
Chapnick, G., Toronto
Charendoff, M. D., Toronto
Chaytor, B. M., Oshawa
Chen, K. C., Hanmer
Chernin, S., West Hill
Cherun, M. J., Ottawa
Cheung, N. S., Uxbridge
Chiarot, J. B., Brampton
Chomyn, J. A. W., Ottawa
Clappison, R. A., Toronto
Clark, J. G., Tillsonburg
Clark, J. W., Niagara-on-the-Lake
Clarke, G. K., Burlington
Clemens, R. L., Waterloo
*Clements, E. R., Sioux Lookout
Cluett, A. W. E., London
Clumpus, F. J., Sudbury
Coburn, D. G., Hamilton
Cole, M. C., Peterborough
Collins, J. E., Simcoe
Combes, B. G., Windsor
*Compton, F. H., Toronto
Coney, E. A., Waterloo
Conn, A. H., Ottawa
Cook, W. F., Sudbury
Cooper, G. C., Windsor
Cooper, M. L., Toronto
Cordone, J., Toronto
Corlett, G. R., Woodstock
Corti, A. F., Sarnia
Coulis, A. J., Sudbury
Coupland, J. G., Almonte
Coupland, J. P., Ottawa
Cousins, D. E., London
Cox, T., Guelph
Coyne, I. M., Bracebridge
Crane, D. J. P., Manitowaning
Crawford, R., Sarnia
Crockford, M. J., Bracebridge
Crouch, J. T., Toronto
Cumberland, T. J., Toronto
Cunningham, R. H. G., London
Dailyde, A. P., Oakville
D'Aloisio, R. S., Sudbury
Danylchuk, B., Fort Frances
Davidson, P. W., Whitby
Davies, J. B., Whitby
Davis, J. C., Belleville
Davis, L., Toronto
Deacon, W. C., Ottawa
Denston, R. W., North Bay
Devine, D. A., Hagersville
Devine, M. C., Cayuga
*Deyette, M. N., Ottawa
Diefenbacher, N. L., Kitchener
Dixon, E. L., Belleville
Dmytruk, B., Oshawa
Dolansky, B. H., Ottawa
Doner, O. P., Elliot Lake
Down, C. C., St. Catharines
Duesling, C. J. W., Ottawa
Duggan, J. H., Stratford
Duiimage, D. D., Dunnville
Duncanson, A. S., London
Dunec, A., Toronto
Dunn, W. J., London
Dunnett, F. H., Brighton
Earle, S. M., Ottawa
Echlin, R. E., Burlington
*Eichel, K. A., Dryden
Elliott, E. V., London
Elliott, H. A., Belleville
Ellis, J. J., Niagara Falls
Ellis, R. G., Toronto
Ellis, R. L., Toronto
Evans, R. F., Picton
Eversley, J. A., Windsor
Fabbro, N. S. J., Sault Ste. Marie
Faelker, J. D., Walkerton
Falconi, S. J., Weston
Farrell, N. A., London
Fawcett, J. E. P., Dundas
Fawcett, J. I. H., Lindsay
*Feasby, R. E., Toronto
*Feasby, W. H., London
Fedorenko, R. W., Southampton
Fedorenko, S., Etobicoke
Fejes, J. M., Windsor

Fendrich, P., London
*Fenton, A. H., Toronto
Fimio, G. J., Toronto
*Finlay, R. C., St. Thomas
Fisk, C. V., Toronto
Fonger, I. E., Bancroft
Fraser, W. G., Burlington
Freedman, H. L., Toronto
Fuller, J. E., St. Marys
Furlong, F. J., Windsor
*Fuzy, S. J., Windsor
Fyffe, E. D., Picton
Galante, V. A., Hamilton
Galbraith, R. H., London
*Gallagher, M. F. J., Windsor
Garfield, B. D., Toronto
Garside, C. J., Ottawa
Gdanski, C. J., Grimsby
Genier, D. V., Cochrane
Genova, J. J., Ajax
Gifford, D. E., Ottawa
Gilbert, D. A., St. Thomas
Ginsberg, R. H., Toronto
Gipters, V., London
Gold, R., Mississauga
Goldberg, H., London
Goldberg, M., Toronto
Goldfarb, A. J., London
Gollop, F. G., Ottawa
Good, C. N., Kitchener
Goodin, I. F., Ottawa
Goodwin, H. W., Toronto
Gorchynski, D. M., Ottawa
Gowland, J. H. C., Kingston
Graff, J. E., Stratford
Grandy, J. R., Cambridge
Gray, P. W., Madoc
Green, H. J., Ottawa
Green, R. O., Scarborough
Greenbaum, N. R., Toronto
Guest, J. A., London
Gutmann, G. I., Malton
Halbert, G., Don Mills
Haldenby, J. F., McKellar
Hall, R. M., Ottawa
Haltrecht, E. S., Willowdale
Hamilton, B. D., Trenton
Hamilton, R. M., Oakville
*Hanaka, G. W., Windsor
Hardy, M. G., Toronto
*Hare, G. C., Toronto
Hare, R. M., Meaford
Harney, F. O. E., Stayner
Harper, B. D., Toronto
Harris, A. J., London
Harris, K. J., Trenton
Harrison, J. V., Trenton
Hartleib, P. C., Kitchener
Hasenplug, H. O., Kitchener
Hayes, R. G., Hamilton
Hazelton, R. D., Toronto
Healy, P. J., Fort Erie
Hemrend, B., Toronto
Hicks, J. K., Hamilton
Hinch, J. B., Toronto
Hipkin, G. A., Belleville
Hobson, J. H., Thunder Bay
Hodgins, N. A., Ottawa
Hoerner, F. W. K., Toronto
Holloway, N. C., Sarnia
Holmberg, S., Toronto
Homenuk, G. P., Hamilton
Honey, R. C., Peterborough
Hooks, E. B., Toronto
*Hrabowsky, I., St. Catharines
Hudgins, W. B., Alliston
*Hunt, A. M., Toronto
Hunter, C. G., Markham
Hunter, H. A., Toronto
Hutchison, L. G., Windsor
Hyland, J. J., Don Mills
Ikse, A. T., Toronto
Imperius, E., Thunder Bay
Imrie, W. J., Toronto
Intrater, A., Toronto
Irwin, F. A., Ottawa
Jackson, M., Toronto
Jacobson, K. A., Thunder Bay
*Jaeger, H. G., Cambridge
Jagaciak, J. M., Belleville
James, R. S., Simcoe
Jarema, J. J., Etobicoke
*Jefferson, K. E., Barrie
Jeffrey, J. D., Parry Sound
Jesin, P. M., Toronto
Joe, A. K., Weston
Johnston, W. J., Martintown
Jolley, H. M., Toronto
Joynt, B. W., Ottawa
Jurczak, E. C., Richmond Hill
Jurczak, W. W., Maple
Kacinik, A. P., Toronto
Kalman, P., Burlington
Kamachi, Y., North Bay
Kamienksi, M. A., Scarborough
Kaye, J. G., Toronto
Keane, W. D., Bowmanville

Keenan, M. V. J., Sault Ste. Marie
Kell, C. L., Oshawa
Kellam, J. H., Gananoque
Kelly, R. D., St. Catharines
Kennedy, E. P., Windsor
Kenneger, C. M., Toronto
Kenny, D. J., Toronto
King, I. S., Toronto
Kline, P., Richmond Hill
Klompus, R., Toronto
Klus, L., Brampton
Knight, M. G., Kingston
Knutson, P. M., Belleville
Knuut, A. L., Toronto
Kogon, S. L., London
Kohn, T., Downsview
Kovacs, E., Lindsay
Koven, L., Toronto
Kozak, A. L., Hamilton
Kreutzer, J., Toronto
Krzewski, R. J., Guelph
Kuliak, P. K., Ottawa
Kurus, R. A. J., Madoc
Kushner, M. L., Thornhill
Kustra, E., Hawkesbury
Lampe, A. W., Windsor
Lamping, J. D., Pembroke
Langenholt, E., Toronto
Langmaid, J. A., Oshawa
Large, V. H., Toronto
Larocque, H., Hawkesbury
Larose, P., Borden
Laska, H. J., Pembroke
Lavoie, M. A. E., Copper Cliff
Lawrence, L. G., Toronto
Lawson, R. C., Aurora
Lawton, D. M., Harrow
Layug, R. B., Mississauga
Lazar, J. A., Willowdale
Learoyd, H. G., Sutton West
*Leckie, A. H., Hamilton
Leggatt, G. G., Napanee
Leitch, H. A., Huntsville
Letersky, J. F., Belleville
Leuty, R. D., Toronto
Levin, L. M., Hamilton
Levin, P. C., Mississauga
Levine, L. B., Toronto
Levine, N., Toronto
Levinson, K. I., Toronto
Lewis, L. B., Toronto
Li, M. W., Ottawa
Lieberman, A. W., Toronto
Lingard, R. J., Exeter
Little, G. E., Niagara Falls
Little, P. S., Kitchener
Liu, W. W. L., Windsor
Livingston, G. R., Windsor
Locking, J., Longlac
London, L., Toronto
Loucks, J. F., Toronto
Loyens, W. J., Glencoe
Lynch, B. G., Sudbury
Lysak, D. W., Thunder Bay
Lysyk, G., Oshawa
Mabee, J. L., Gananoque
Macartney, E. S., Ottawa
MacDonald, D. H., *Toronto
MacDonald, R. A., Kincardine
MacKay, D. G., Port Elgin
MacKay, D. R., Dundas
MacKay, E. D., Brampton
*MacKenzie, W. S., Toronto
Mackie, R. W., Hamilton
*MacLachlan, L. E., Ottawa
Madronich, W. G., Hamilton
*Maggisano, G., Downsview
Magnus, S. G., Clifford
Main, J. H. P., Toronto
Marcogliese, S. J., Hamilton
Marion, H. J., Pembroke
Markham, B. R., London
Markle, P. W. C., Agincourt
Markulin, R. A., St. Catharines
Marquis, S. W., Toronto
Marsh, B. A., Sarnia
*Martin, J. M., Toronto
Mason, W. H. E., London
Mathers, K. S., Kitchener
Matthews, J. J., Woodstock
Maugeri, G. J., Toronto
McColeman, W. J., Barrie
McColl, T. D., London
*McConnachie, T. I., Thunder Bay
McCutcheon, J. O., London
McCutcheon, W. C., Belleville
McDermid, D. C., Carleton Place
*McDonald, J. A., Ottawa
McGinn, J. R. A., Thunder Bay
McGinty, R. M., Windsor
McGuire, J. P., Brockville
McIntosh, W. G., Toronto
*McKeough, M. J., Orleans
McKeown, G. K., Thunder Bay
McLachlan, P. J., Strathroy
McLean, W. M., Sarnia
McNab, R. G., Port Perry

McNally, T. A., Trenton
McQueen, D. T., Burlington
McWhirter, R. A., Belleville
Medland, D. R., Milton
Mednick, I., Toronto
Meikle, J. E. S., Toronto
Meilus, V. J., Toronto
Meredith, D. A., Deseronto
Mergl, J. P., Ottawa
Merritt, R. D., London
Metcalfe, W. J., Simcoe
Metrick, L., Ottawa
Miles, J. R., St. Catharines
Milligan, T. E., Toronto
Mills, W. H., Toronto
*Milroy, P. C., Hamilton
Misek, W. J., Bramalea
Mitchell, E. S., Ottawa
Mitchell, F., Blind River
Mitton, G. T., Markham
Mochizuki, K. G., London
Moebus, W. H., Cobourg
Morandi, G. D., Bolton
Morkis, P., Toronto
Morris, J. R., Kirkland Lake
Morrow, G. M., Hamilton
Mound, E. W., Brighton
Munro, C. S., Toronto
Munroe, C. R., Kingston
Murphy, M. A., Toronto
*Naiberg, M., Thornhill
Naikauskas, D., Windsor
Narula, J. K., Don Mills
Nativik, A. M., Newbury
Nelson, R. M., Peterborough
Newman, S., Toronto
Nikiforuk, G., Toronto
Nikiforuk, J., Brantford
Nordine, M. C., London
Norman, M., Ottawa
Oates, L. E., Chatham
O'Connor, D. J., Ottawa
Oldfield, L. T., Cambridge
Oliphant, R. G., Chatham
Oliver, N. E., Ottawa
O'Neill, E. A., Kingston
Orfus, H., Rexdale
Osephchook, D. B., Ottawa
Oswald, G. A., St. Catharines
Owen, A. M., Wawa
Palement, M. G., Sarnia
Paluch, R. M. J., Hamilton
Paquette, G. J., Sudbury
Parisi, J. J., Timmins
Parks, L., Toronto
Pascoe, H. W., Toronto
Patrick, W. R., Trenton
Paynter, K. J., Ottawa
Pearlman, M., Sarnia
Pedlar, B. L., Burlington
Peloso, P. G., Kitchener
Pelton, H. R., Sudbury
Perlmutter, M. F., Bramalea
Peters, J. H., Goderich
Petrisor, A. J., Woodstock
*Petro, V. A., Hamilton
Petrullo, C. L., Niagara Falls
Pezuk, W. D., Barrie
Pilon, M. F., St. Catharines
Plank, D. E., Hamilton
Politi, E. L., Hamilton
Popovich, F., Burlington
Post, G. C., Thunder Bay
Potashin, H. M., Toronto
Pownall, K. F., Toronto
Pritchard, J. S., Ottawa
Purc, J. A., Minden
Purves, J. D., Toronto
Purves, W. T., Toronto
Puz, R. P., Toronto
Rackham, L. D., Belleville
Rajan, W. C., Tweed
Rajczak, E. J., Hamilton
Rapaich, D. M., Sarnia
Rawluk, R. M., Campbellford
Reid, H. W., Toronto
Remillong, G. J., Windsor
Rey, E. M., Toronto
Richardson, B. A., Kitchener
Richardson, L. A., CFB Borden
Richmond, A., Downsview
Richmond, J. E., Trenton
Riley, R. L., Huntsville
Ringland, T. C., Pembroke
Ripley, D. J., Collingwood
Roach, K. L., Pembroke
Robinson, B. W., Ottawa
Robinson, W. G., London
Rockman, P. S., Toronto
Rollasten, L., Toronto
Rondeau, B. H. M., London
Rosen, S., Toronto
Rosenthal, S. E., Scarborough
Ross, R. B., Don Mills
Rowat, J. D., Ottawa
Rucels, L., Toronto
Rudell, C. A., London
Rudell, W. M., Bowmanville
*Ryan, R. P. W., London
Sabatini, I. M., Toronto

Sadauskas, V., Toronto
Sage, D. G., Thessalon
*Sandelli, J. R., Port Colborne
Sanderson, R. M., Windsor
Saunders, L. J., Willowdale
Sawchuk, K. L., Atikokan
*Scarfone, J. D., Windsor
Schatz, S., Scarborough
Schiller, L. J., Windsor
Schofield, I. D. F., London
Schreiber, M., Toronto
Schwartz, H. E., Unionville
Scott, G. K., Hamilton
Sessle, B. J., Toronto
*Settlington, K. R. P., London
Sharp, D. W., Guelph
Shaw, J. V. M., Midland
*Shaw, M. J., Ottawa
Shaw, R. M., London
Sherman, J. A., Toronto
Shewchuk, W., Ottawa
Shirkey, R. J., Toronto
Shultis, W. K., Toronto
Sidlofsky, B., Willowdale
Simpson, B. A., Downsview
*Sinclair, W. J., Scarborough
Singer, M. H., Toronto
Siren, J. V., Thunder Bay
*Skea, G. B., Thunder Bay
Skelton, D. T., Belleville
Slaney, J. R., Wallaceburg
Slater, M. A., Downsview
*Small, S. C., Toronto
Smith, A. D., Scarborough
Smith, H. F., Brantford
Smith, N. C., Markdale
Smits, J., Markdale
Smyth, B. R., Peterborough
Solomon, G. A., Belleville
Somborac, M., Collingwood
Souter, G. B., Barrie
*Southward, K. S., Beamsville
Speck, J. E., Toronto
Spence, W. J., Toronto
Spencer, D. M., London
Spencer, W. J., Niagara Falls
Sprott, W. L., Ottawa
St-Aubin, D. R., Sudbury
St. George, G. L., Sturgeon Falls
Stacey, E. J., Oshawa
Stampa, M. M., Toronto
Stansfield, J. E., Belleville
Starkovski, K. D., Scarborough
Stauffer, H. W., Barrie
Staunton, E. W., Belleville
Steggles, W. A., Smiths Falls
Stewart, G. H., Thornbury
Storey, T. K., Sarnia
Strain, D., Toronto
Styka, R. S., Bramalea
Sullivan, R. J., Orillia
Sultmanis, G., Toronto
Summers, T. A., Etobicoke
Sunohara, P. T., Toronto
Sussman, L. M., Toronto
Suzuki, G. D., Brampton
Sweetnam, G. H., Lindsay
Sybersma, D. T., Stratford
Talvet, M. P., St. Catharines
*Tam, M. S., Burlington
Tankovich, D., Toronto
*Taylor, J. B., London
Taylor, J. E., Cornwall
Taylor, M. D., Islington
Tervit, T. C., Burlington
Teskey, D. C., Toronto
Thompson, E. S., London
Thompson, J. R., Niagara Falls
Thompson, W. R., Ottawa
Thurston, D. B., Owen Sound
*Timberg, A. I., Ottawa
Timmers, B. W., Ottawa
Tokiwa, J. T., Toronto
Torneck, C. D., Toronto
Totton, J. P., Owen Sound
Tozman, E., Downsview
Tropea, F. W., Toronto
Truemner, N. P., Kitchener
Truscott, G. N., Ottawa
Tso, D., Toronto
Tuch, L. H., Toronto
Tucker, G. E., Trenton
Tulumello, A. V., Welland
Vachon, A. J., Cornwall
Van Allen, G. B., Brantford
Vano, A. R., Guelph
Vasiga, G. J., Kitchener
Vavra, J., Hanmer
Venditti, B. A., Downsview
Verbic, Z. A., Toronto
Vernick, J., Windsor
Vollmer, R. H., Carp
Vitpil, O., Thunder Bay
*Wachna, E., Toronto
Wachna, T. H., Windsor
Wachta, E. J., Guelph
Walden, G. F., London

Alker, E. S., Toronto
Allace, J. S. P., Kitchener
Alsh, J. L. Jr., Perth
Alter, E. C., North Bay
Ardie, D. K., St. Thomas
Arren, R. C., Toronto
Arrick, D. A., Cobourg
Abster, N. H., Hamilton
Ailer, C. G., Guelph
Aingarten, S. A., Willowdale
Andrt, R., Toronto
Aetham, D. W., Toronto
Ahte, G. C., Oshawa
Ahte, W. G., New Liskeard
Ahtely, A. R., Oakville
Alcox, J. D., Moose Factory
Allard, J. C., Chatham
Alliams, B., Brantford
Alliams, G. I., Belleville
Alliams, J., Clarkson
Allson, P. E., Oshawa
Allson, A. J., Windsor
Allson, J. R., South Porcupine
Allson, R. E., Hearst
Aichel, J., Toronto
Ang, D. G., Ottawa
Aood, D. W., Toronto
Aoodall, G. L., Milton
Aoods, W. G., Toronto
Aoolidge, R. G., Orillia
Aright, W. D. M., Cobourg
Ayma, R. J., Bramalea
Aasovich, R. J., Sault Ste. Marie
p, G. K. C., Willowdale
Aile, O. J., Toronto
Aine, S. S., Toronto
Aleik, W. Z., Weston
Alk-Hryskievic, R., Barrie
Aweig, S. W., Bramalea

ANITOBA

Abra, J. E., Winnipeg
Acheson, D. W., Winnipeg
Agnew, E. G., Boissevain
Assiniboine Dental Group, Winnipeg
Achinsky, D. J., Winnipeg
Ackman, G. W., Winnipeg
Aker, A. B., Winnipeg
Annerman, J. A., Winnipeg
Anderinger, G. W., Carman
Aernstein, M. I., Winnipeg
Aorden, S. M., Winnipeg
Arass, G. A., Winnipeg
Ampbell, W. G., Winnipeg
Aarley, T. D., Winnipeg
Aaume, G., Shilo
Aherewan, G., Winnipeg
Aamilar, J. D., Winnipeg
Aohen, J. H., Winnipeg
Aole, E. N., Winnipeg
Aarford, P. R., Winnipeg
Aawes, C., Winnipeg
Ann, S. C., Portage La Prairie
Aast, H., Winnipeg
Aaerz, D. H., Morden
Aoren, S., Winnipeg
Areenfeld, R. S., Winnipeg
Aatkin, D. M., Pine Falls
Art, H. W., Winnipeg
Aachter, F. J., Winnipeg
Aachter, T., Winnipeg
Aunt, R. A., Winnipeg
Aayman, S., Winnipeg
Acklin, P. M., Winnipeg
Aayal, J. O., Winnipeg
Aahane, L. H., Winnipeg
Aahanovitch, H., Winnipeg
Aapitz, A. H., Winnipeg
Aohn, M. W., Winnipeg
Aaba, R., Winnipeg
Aachance, A. S., St-Boniface
Aalancer, T. A., Winnipeg
AacCormick, C. H., Winnipeg
Aalclnnes, G. N., Winnipeg
Aalot, M. A., Winnipeg
Aaelison, J. W., Winnipeg
Aalilnik, F., Morden
Aarrott, F. W., Portage La Prairie
Aaulos, D. S., Winnipeg
Aaearson, B. L., Winnipeg
Aaeikoff, M. D., Winnipeg
Aaiché, R. E., Winnipeg
Aaorchazka, B. E., Virden
Aaudoisale, M. B., Winnipeg
Aahinoff, A. J., Winnipeg
Aahort, F. E., Winnipeg
Aaimmons, S. R., Winnipeg
Aalogan, J., Selkirk
Aamith, D. M., Winnipeg
Aatasiuk, J. N., Portage La Prairie
Aatephen, R. I., Winnipeg
Aatockton, L. W., Winnipeg
Aauntund, C. H., Pinawa
Aakachyk, T., Neepawa
Aaowe, H., Winnipeg

Tritt, J. N., Winnipeg
Tweed, H. W., Winnipeg
Vinsky, I., Winnipeg
*Watson, V. L., Dauphin
*Weel, O. F., Swan River
Williams, P. T., Winnipeg
Wolch, I., Winnipeg
Wong, A. K. K., Winnipeg
Anonymous

SASKATCHEWAN

Ashing, M. C., Unity
Bookhalter, B. S., Regina
Bookhalter, P., Regina
*Bourassa, F. M., Regina
*Brett, R. O., Regina
Cameron, N. I., Nipawin
Cook, A. F., Kipling
*Culham, L. G., Regina
Cunningham, J. P., Saskatoon
*Davey, W. G., Regina
Dickson, M. W., La Ronge
*Donovan, T. E., Regina
Earl, N. A., Regina
Epstein, J. B., Saskatoon
*Evenden, G. J., Regina
Flyuk, A., Eston
Freidin, E., Saskatoon
Gentillon, O., Saskatoon
Gold, P. L., Regina
Graham, D. A., Regina
Hamilton, R. I., Saskatoon
Hancock, W. F., Fort Qu'Appelle
Hastings, L. E., Regina
Henderson, P. D., Saskatoon
Houston, G. M., Shaunavon
Hudyma, W., Wynyard
*Ivanovsky, V., Regina
Jenkins, E. N. F., Regina
Johnson, D. C., Saskatoon
Karasin, A. J., Regina
Kern, H. D., Swift Current
Kinzel, H. A., Regina
Leask, A. D., Moose Jaw
Little, R. V., Saskatoon
MacFarlane, D. M., Regina
*Mang, B. L., Regina
*Martin, W. K., Regina
Mokleby, T. S., Prince Albert
*Muirhead, A. F., Moose Jaw
Niedermayer, J. W., Regina
*Orpe, J., Regina
*Orpe, L. A., Regina
Parker, D. M., Regina
Peacock, G. H., Saskatoon
*Plosz, D. J., Saskatoon
Rabatic, P., Saskatoon
*Racine, R. E., Saskatoon
Reid, R. D., Prince Albert
*Reid, R. N., Regina
Riben, P., Saskatoon
Rieger, W. F., Regina
Robb, H. C., Regina Beach
Ruprecht, A., Saskatoon
Sawa, S. O., Saskatoon
Schwann, G. W., Regina
*Shiffman, J., Saskatoon
Simon, T. R., Fort Qu'Appelle
Singer, A., Saskatoon
Singer, D. L., Saskatoon
Smith-Windsor, B., Indian Head
Taillon, R. J., Assiniboia
Thomson, H. E., Uranium City
Trafananko, H. W., Prince Albert
*Waite, W. T., Saskatoon
*White, B. E., Saskatoon
Wihak, F. T., Regina
Wood, R. L., Estevan

ALBERTA

Abrams, B. M., Calgary
Adler, B. S., Edmonton
Adler, E., Edmonton
Alexander, T. A., Calgary
Allison, E. F., Calgary
Amonson, L. E., Calgary
Anderson, G. F., Lethbridge
Aunger, W. R., Stettler
Bailey, T. S., Calgary
Bair, K. E., Leduc
Blaquiere, R. H., Edmonton
Blasetti, M. E., Okotoks
Boadi, M. Y., Calgary
Boyce, M. S., Calgary
Brooks, L. K., Calgary
Bruntjen, R. C., Stettler
*Bryant, E. C. V., Pincher Creek
Burgman, R. B., Blairmore
Burnham, K. A., Edmonton
*Carroll, D. O., Grande Prairie
Chiu, T. K. Y., Edmonton
Clark, G. D., Claresholm
Culham, D. I., Ponoka
DeAbreu, M. I., Killam
Deane, G. A., Edmonton
*Decker, G. E., Edmonton

Deedrick, D. C., Lacombe
Derbyshire, J. A., Calgary
Dickson, R. G., Drumheller
Didow, D. D., Elk Point
Downey, A. A., Calgary
Duke, C. G., Edmonton
Duncan, R. M., Calgary
Edward, C. J., Edmonton
Fearon, R. C. A., Camrose
Fedorak, G. G., Calgary
Finnigan, P. D., Edmonton
Fleming, B. P., Drayton Valley
*Fletcher, A. D., Edmonton
Fletcher, D. E., Lethbridge
Florence, D. E., Fort McMurray
Florence, R. H., Edmonton
Foster, G. S., Calgary
Gau, D. J., Edmonton
Gibb, G. H., Edmonton
Gibson, J. A., Calgary
Gish, R. Y., Lacombe
*Glover, K. E., Edmonton
Godfrey, N. T., Edmonton
*Gray, R. A., Medicine Hat
Green, D. F., Calgary
Greenaway, J. E., Edmonton
Gregory, F. D., Medicine Hat
Grigoruk, A., Calgary
Habijanac, D. R., Medicine Hat
Haines, R. S., Spruce Grove
Hamilton, R. S., Barrhead
*Harms, J. R., Edmonton
Hartford, A., Edmonton
Haryett, R. D., Edmonton
Hauck, C. C., Wainwright
Hauck, D. E., Wainwright
*Hennings, M. N., Calgary
Hoffman, B. S., Calgary
Holthe, E. M., Calgary
Hoshizaki, S. M., Edmonton
*Hover, B. J. V., Lethbridge
Jerace, G. D., Westlock
Jespersen, H. R., Edmonton
Jorgenson, H. G., Calgary
Kapach, J. M., Calgary
Kawanami, R. H., Leduc
Killick, J., Edmonton
Kjorven, L. N., Red Deer
*Kott, L. J., Edmonton
Kuzyk, B. L., Edmonton
*Lastiwka, L. R., Edmonton
Lawton, D. N., St. Paul
Lazaruk, D. I., Edmonton
Leboldus, F. J., Rimbey
Lee, M. K., Edmonton
Leonard, D. B., Edmonton
Leung, A. K. P., Sherwood Park
Lindskoog, G. T., Edmonton
Lipkind, M. J., Calgary
Lippitt, R. G., Calgary
*Little, J. S., Edmonton
Lizaize, A. L., Edmonton
Long, W. J., Calgary
Low, B. A., Edmonton
Luxford, E. W. P., Calgary
MacLean, H. R., Edmonton
Mandin, L. G., St. Paul
Martens, S. J., Calgary
Martiniello, B. P., Edmonton
*Mathieson, J. E. L., Edmonton
Mazurat, N. M., Medley
McClelland, R. C., Edmonton
*McCune, C. T., Brooks
*McIntyre, D. F., Edmonton
McIntyre, E. W., Edmonton
McIver, G. D., Camrose
McKechnie, D. C., Edmonton
McLean, J. C., Edmonton
McNab, J. A., Edmonton
*Mickleborough, M. E., Edmonton
Mielke, R. J., Westlock
Miller, A. H., Calgary
Morris, D. G., Calgary
Myers, G. W., Edmonton
Nind, W. E. J., Calgary
Ondland, R. D., Calgary
Olsen, A. A., Edmonton
Page, C. A., Blairmore
Pedersen, A., Calgary
Pelech, J. O., Edmonton
*Piercy, A. K., Calgary
*Pittaway, J. A., Calgary
*Polukoshko, K. M., Edmonton
Powell, K. W., Edmonton
*Prybysh, A. E., Fairview
*Quinn, H. J., Grande Prairie
Rakochey, E. A., Edmonton
Rawlyck, T. A., Lacombe
Revell, A. M., Edmonton
Rix, R. W., Cold Lake
Root, S. A., Peace River
Rodovics, A. G., Edmonton
*Sandercock, G. R., Peace River
Semple, J. M., Rocky Mountain House

Sharpe, C. J., Red Deer
Shillington, R. T., Calgary
Shimbashi, H., Drayton Valley
Sikora, J., Edmonton
Sirdar, J. F. P., Edmonton
*Soklofske, A. W., Medicine Hat
Sopkiw, V. S., Calgary
Sparrow, A. D., Calgary
Sperber, G. H., Edmonton
*Steel, J. C., Edmonton
Street, G. W., Calgary
Swanson, W. D., Edmonton
Taillon, R. J., Calgary
Tawiah, S. K., Calgary
Thomas, N. R., Edmonton
Travis, G., Red Deer
Tripp, W. S., Medicine Hat
Turner, R. W., Edmonton
Upton, D. E., Calgary
Urner, B., Edmonton
Urschel, A. R., Edmonton
Utas, G. E., Grande Prairie
*Vandahl, D. R., Calgary
Venne, J. M., St. Albert
Warren, J. M., Calgary
*Weeks, B. H., Calgary
Wong, K. W., St. Albert
Yaskowich, C. J., Edmonton
Young, J. E., Edmonton
*Zimmerman, J., Calgary

BRITISH COLUMBIA COLOMBIE BRITANNIQUE

Alexander, I. M., Victoria
Alexander, L. D., Vancouver
Allegretto, R. J., Kamloops
Aoyama, R., Prince George
*Atkinson, L. R., Victoria
Baker, F. G., Kelowna
Banford, F. W., Coquitlam
*Basaraba, N., Vancouver
Bauman, M. K., Cranbrook
Beaton, R. S., Richmond
Benham, H. D., Duncan
Berezon, B. B., Victoria
Bergstad, T. N. H., Penticton
Berman, L. D., Sechelt
Booth, T. G., Richmond
Bourgeault, R. E. M., West Vancouver
*Bowman, A., Vancouver
*Braden, D. O., Victoria
Brass, J. G., St. Josef
Bridges, J. H., Burnaby
Burwash, D. C., Dawson Creek
Campbell, R. H., Fernie
Cartier, C. N., Vancouver
*Chang, G. Y., Vancouver
Chenail, B. L., 100 Mile House
Chesko, E. E., West Vancouver
Cheung, K. H., Burnaby
Clarke, E. W. R., Vancouver
Clarke, R. J., West Vancouver
Cochrane, J. M., Prince George
Craig, C. E., Vancouver
*Cranstoun, G. B., Victoria
Creasy, G. I., Aldergrove
*Culham, M. S., Nelson
Davis, R. W., West Vancouver
Delwo, B. F., Quesnel
Dey, A., West Vancouver
Dohan, M. J. T., Victoria
Dombrowski, H. J., Port Alberni
*Dow, P. R., Vancouver
*Eg, R. C., Sidney
Elliot, W. L., Vancouver
Erickson, V. M., Dawson Creek
Fantin, T. D., Trail
*Faryna, M. H., Victoria
*Ferber, H. V., Kamloops
Fietz, D. J., Merritt
Foulkes, J. R., Salmon Arm
Fraser, A. A., West Vancouver
Freeze, G. A., North Vancouver
Froese, W. J., Chilliwack
*Fukushima, E. K., Vancouver
*Gallagher, J. J., Campbell River
Gallagher, S. J., Vancouver
Galvin, J. M., Duncan
Gasol, I. G., Vancouver
Gibson, G. B., Port Coquitlam
Gifford, R. J., New Westminster
Goh, C. S., Vancouver
Gordon, M., Vancouver
Gottschling, G. D., Kitimat
Gris, J., Kimberley
Guy, G. L., Langley
Hadaway, W. C., North Delta
Hamovich, J. A., Vancouver
Harrop, T. J., Vancouver
Hayes, A. M., Vancouver
Heppler, L. J., West Vancouver
Hicks, R. N., West Vancouver
Hornby, J. A., Campbell River
Iwasaki, Y., Kamloops
Kenney, A. A. B., Vancouver
*Kerrisdale Dental Group, Vancouver

King, J. A., Heriot Bay
Kinson, S. R., West Vancouver
Kirstiuk, G. M., Williams Lake
Kline, T. S., Vancouver
Komm, R. W., North Vancouver
Kovits, J. H., Chilliwack
Lam, T. L. W., Port Coquitlam
Legatto, B. D., Trail
Lemiskis, D. M., Vernon
Lepp, V. A., Terrace
Letham, C. W., Salmon Arm
Letham, W. H., Salmon Arm
Lewis, D. R., West Vancouver
Lo, M. H. F., Burnaby
Longley, B. C., Merritt
MacEwen, E. B., Burns Lake
*MacFarlane, D. E., Vancouver
MacKenzie, W. D., Burnaby
Maclean, M. W., Vancouver
MacMillan, W. R., Nanaimo
Magnall, H. R., Vancouver
Mann, R. M., Vancouver
Margolese, S., Vancouver
Markey, R. J., Richmond
Marks, E., Vancouver
Mason, C. M., New Westminster
Mason, D. C., Vernon
Matthews, J. A., Vernon
McCombie, F., Victoria
McGinn, R. F., Kamloops
*McMurray, G. L., Parksville
Merrell, J. H., Vancouver
Mesplier, E. J., Vancouver
Milne, C. G., Smithers
Mori, R. T., Salmon Arm
Morse, H. F., Maple Ridge
Munn, R. E. D., Vancouver
Nasedkin, J. N., Vancouver
Neff, L. C., Vancouver
Neuman, K. A., Vancouver
Ng, G. C. S., Burnaby
Ng, S. C., Richmond
Nishio, N. K., Nanaimo
*Nordstrom, S. H., Dawson Creek
Nugent, R. J., Campbell River
Oakley, E. T., Williams Lake
Pankratz, H. A., Williams Lake
Paterson, W. S., White Rock
Patton, R. E., Vancouver
Peach, D. F., Langley
Penner, E. J., White Rock
Pettapiece, H. G., Victoria
*Plumb, B. M., Vancouver
Prasad, S. S., Mission
Proctor, A. R., Victoria
Rauch, B., Victoria
Reed, B. E., Vancouver
Reid, J. F., North Vancouver
Reilly, J. P., Richmond
*Remocker, G. B., Burnaby
Rix, R. G., Prince George
Rondeau, P. L., Vancouver
Rose, A. N., New Westminster
Rose, D. E., Vancouver
Ross, A. L., Vancouver
*Ross, D. G., Powell River
Russell, G. C., Victoria
Sandbrand, J. W., Vancouver
Savoie, F. L., Nanaimo
Sellars, D. E., Cranbrook
Senini, J. T., Nanaimo
Sherry, W. B., New Westminster
Sills, R. C., Sidney
Sinclair, D. A., Richmond
*Sproule, W. R., Vancouver
Strom, J. O., West Vancouver
Sumner, R., Vancouver
Sussel, W. H., Chilliwack
Swanson, A. E., Vancouver
Takahashi, D. N., Kamloops
*Tanaka, J. H., Richmond
Tarr, J. W., Nanaimo
Teasdale, C. J., Richmond
Thompson, K. M., Campbell River
Thompson, R. L., Masset
Thomson, A. J. L., Vancouver
Tobias, J. A., Vancouver
Trester, P. H., Vancouver
Tytkiw, E. W., Vernon
Van Alstine, R. S., Victoria
*Vanry, S., Vancouver
*Varma, V. M., Powell River
*Waddell, R. M. D., Prince Rupert
Wainwright, W. M., Vancouver
Walhovd, T. H., Creston
*Waller, D. E., Prince George
Walley, K. M., Vancouver
Warren, D. H., Vancouver
Westrup, O., Cranbrook
*Wilcock, J. B., Vancouver
Williams, B. C., Victoria
Williams, P. W., Duncan
Wolverton, H. G., Vancouver
*Wright, O. F., Vancouver
Yeo, D. J., Vancouver
Yip, B., Vancouver
*Zaparinuk, J. C., Victoria
Zens, F. W., Port Alberni
Anonymous

165

OUTSIDE / ETRANGER

Bouris, M. S., Tacoma, Wash.
Brogan, H. W., Canadian Forces Europe
Eisner, J. E., Orange, N. J.
*Gibson, M. J., Port Huron, Mich.
Goodman, S. E., Short Hills, N. J.
*Hillenbrand, H., Chicago, Ill.
*Konchak, P. A., Canadian Forces Europe
Larder, T. C., Boston, Mass.
Lévesque, M. A., Frobisher Bay, N.W.T.
*Moore, D. M., Canadian Forces Europe
Nye, G. R., San Francisco, Cal.
Rapp, R., Pittsburgh, Pa.
*Tesar, D. D., Yellowknife, N. W. T.

OTHER CONTRIBUTORS / AUTRES DONATEURS

Bremner, Ms. P., Burnaby, B.C.
Cowling, Ms. A. M., Toronto, Ont.
Craig, Mrs. G. H., Belleville, Ont.
*Currie, Mr. A. S., Toronto, Ont.
Francis, Mrs. W., Montreal, Que.
Grimsgaard, Mr. I. F., Pointe Claire, Que.
Kates, Mr. & Mrs. M. H., Willowdale, Ont.
McDonald, Mr. D. M., Toronto, Ont.
McLean, Mr. C. M., Oshawa, Ont.
*McLeod, Dr. J. A., Winnipeg, Man.
*McLeod, Mrs. M. C., North Vancouver, B.C.
Stratas, Mrs. D., Scarborough, Ont.
*Wansbrough, Mrs. E. M., Ottawa, Ont.

DENTAL HYGIENISTS / HYGIENISTES DENTAIRES

Aitken, S. M., Rosemere, Que.
Bespflug, E. N. E., Victoria, B.C.
Besser, N. J., Kapuskasing, Ont.
Bland, M. L., Gibson's, B.C.
Bonchek, J. F., Hampton, Ont.
Bryant, S. D., Regina, Sask.
Butt, G. M., Halifax, N.S.
Clark, S. K., Newmarket, Ont.
Clarke, D., West Vancouver, B.C.
Cohen, B. R., Toronto, Ont.
Coholan, M. E., Fredericton, N.B.
Cool, G., Prince Rupert, B.C.
Corkum, S., Halifax, N.S.
Cormier, M. A., Sydney, N.S.
Costigane, J. E., Waterloo, Ont.
Craig, B. J., Vancouver, B.C.
Craven, R. A., Waterloo, Ont.
Dailey, B. L., Mississauga, Ont.
Davies, S. L., Regina, Sask.
Dimitri, M. J., Richmond, B.C.
Donis, M. F., Delta, B.C.
Donovan, H. L., Regina, Sask.
Dryden, S. E. B., Edmonton, Alta.
Dumas, D., Tracy, Que.
Elliot, K., Edmonton, Alta.
Falconer, C., London, Ont.
Feller, S. J., Winnipeg, Man.
Foerter, V., Hanmer, Ont.
Franzgrote, H. E., Maxville, Ont.
French, S. B., Ottawa, Ont.
French, S. H., Ottawa, Ont.
Gardner, W. J., Vancouver, B.C.

Gold, I. L., Winnipeg, Man.
Goodman, S., Toronto, Ont.
Gutkin, B., Pine Falls, Man.
Hagerman, H. A., Beckley, W.Va.
Hall, P. L., Etobicoke, Ont.
Halowski, W. A., Vancouver, B.C.
Hamill, M., North Vancouver, B.C.
Hartson, M., Castlegar, B.C.
Harwood, N.E., Nanaimo, B.C.
Hendrick, K. F., Toronto, Ont.
Hewton, B. I., Surrey, B. C.
Hill, A. E., Islington, Ont.
Jesin, E. F., Toronto, Ont.
Johnson, P. M., Aurora, Ont.
Johnson, D., Grand Forks, B.C.
Junkin, M. E., London, Ont.
Kenny, M. D., Oyen, Alta.
Kline, C., Vancouver, B.C.
Kuehl, K. A., Utopia, Ont.
Lang, D., Mississauga, Ont.
Langrick, S. A., Toronto, Ont.
Larder, P. M., Boston, Mass.
Lawson, F., Vancouver, B.C.
LeClair, D., Winnipeg, Man.
Little, M., Dollard-des-Ormeaux, Que.
Luginbuhl, S., North Vancouver, B.C.

Lyons, D. B., Scarborough, Ont.
MacDonald, K., Halifax, N.S.
Maschak, L. A. M., Vancouver, B.C.
McCance, L. S., Markham, Ont.
McGinis, J. V., Wabush, Nfld.
McNee, E. D., White Rock, B.C.
Osback, H., Saskatoon, Sask.
Pelletier, M. A., Moncton, N.B.
Phillips, D. F., Edmonton, Alta.
Poole, B. T., Kingston, Ont.
Rimmer, S. J., Kelowna, B.C.
Robertson, P. D., North Vancouver, B.C.
Robichaud, L., Ste-Foy, Que.
Salcman, S. R., Toronto, Ont.
Scoles, D. C., Montreal, Que.
Seabrook, I., Sherwood Park, Alta.
Smith, S. M., Edmonton, Alta.
Soren, J. M., Toronto, Ont.
Stauffert, M., Barrie, Ont.
Street, M. D., Calgary, Alta.
Sturmwind, D. M., Chemainus, B.C.
Swanton, S. E., Guelph, Ont.
Voris, J. S., Vancouver, B.C.
Walsh, M., Mississauga, Ont.
Watts, L. M., Calgary, Alta.
Whitney, C. L., North Vancouver, B.C.
Wood, A. E., Toronto, Ont.
Workman, F. L., Vancouver, B.C.
Worobey, C. L., Winnipeg, Man.
Zurbrigg, J. R., Sudbury, Ont.

Board of Trustees Conseil des Fiduciaires

John W. Neilson, D.D.S. *Chairman/Président*
Winnipeg, Manitoba

Stanley O. Tebbutt *Vice Chairman/Vice Président*
Toronto, Ontario

Henri Brouillet, D.D.S.
Montréal, Québec

Michael J. Crompton, D.D.S.
Moncton, New Brunswick

Alex S. Currie
Toronto, Ontario

James A. Guest, D.D.S.
London, Ontario

Harold Hillenbrand, D.D.S.
Chicago, Illinois

W. Kenneth Martin, D.D.S.
Regina, Saskatchewan

Basil M. Plumb, D.D.S.
Vancouver, British Columbia

Lloyd A. Stevenson
Ottawa, Ontario

Advisory Committee on Fellowship Selection Comité d'Aviseurs sur l'Octroi des Bourses

Ralph C. Burgess, D.D.S. *Chairman/Président*
Toronto, Ontario

A. Murray Hunt, D.D.S.
Toronto, Ontario

Alain Vaillancourt, D.D.S.
Montréal, Québec

David T. Zack, D.D.S.
Vancouver, British Columbia

Executive Director Directeur Administratif

Murray McDonald
Toronto, Ontario

CFDE Office Bureau du FCED

Suite 205
44 Eglinton Avenue West
Toronto, Ontario M4R 1A1
Telephone: (416) 481-0650

Printing costs have been contributed by
The L. D. Caulk Company of Canada and Dentsply Canada Limited.

L. D. Caulk Company of Canada et
Dentsply Canada Limited ont assumé les frais d'imprimerie.

The beautiful photograph of the butterfly decorating the pages of this report is by kind permission of Dr. W. Aubrey Crich. Dr. Crich, a 79-year-old former oral surgeon, is an internationally acclaimed photographer.

La superbe photo d'un papillon qui illustre les pages de ce rapport est publiée grâce à l'aimable autorisation du Dr W. Aubrey Crich. Le Dr Crich, âgé de 79 ans, était autrefois stomatologue; il est un photographe de renommée internationale.

**C'est ici
que tout
nouveau dentier
doit faire
ses preuves.**

Cherchez le croissant.

Demandez à votre assistante d'examiner les linguales antérieures. Si ce sont des dents TRUBYTE®, elle verra une petite marque en forme de croissant.

Si elle ne trouve pas le croissant, le dentier ne comprend pas de dents Trubyte.

Quand vous payez pour avoir ce qu'il y a de mieux, vous devez obtenir ce qu'il y a de mieux.



Cherchez le croissant (☾) sur ces marques populaires Trubyte®

ANTERIEURES▶	Bioblend®	Bioform®	Biotone®	New Hue®V.F.	
--------------	-----------	----------	----------	--------------	--

TRUBYTE®

*Créateur de d'excellents produits
pour l'art dentaire.*

D™ Dentsply Canada Ltd.

© 1976 Dentsply International, Inc.
Tous droits réservés

Le croissant est une marque déposée de Dentsply International Inc., York, PA



SMS*

THE ONLY NON-PARALLEL, VERTICAL PIN SPLINTING SYSTEM

TIME SAVING

Two office visit procedure from start to finish.

EFFICIENT

Divergent pin orientations provide additional mechanical anchorage.

ECONOMICAL

The technique is performed with conventional office equipment.

SAFE

Non-parallel pins avoid the encroachment into the pulp chamber.

VERSATILE

For repairs, additions and co-splinting with all known techniques.

designers and manufacturers of products for finer dentistry.

Available only through your dealer

*Pat. No. 3449830



WHALEDENT International

Division of IPCO Hospital Supply Corp.

236 fifth avenue, new york, n.y. 10001

DEMONSTRATED AT ALL MAJOR CONVENTIONS



The Honorable Marc Lalonde, Minister of National Health and Welfare, and Dr. Michael J. Crompton, President of CDA, unveil the plaque commemorating the official opening of the Canadian Dental Association's new headquarters building in Ottawa.

CANADIAN DENTAL ASSOCIATION CELEBRATES OFFICIAL OPENING OF OTTAWA HEADQUARTERS

The Honorable Marc Lalonde, Minister of National Health and Welfare, officially opened the new headquarters of the Canadian Dental Association during a special ceremony held on the evening of March 10, 1977. More than 150 representatives of the dental profession and their guests from allied associations were present as Mr. Lalonde unveiled a plaque commemorating the occasion.

Participating with the Minister in the ceremony were: Dr. H.L. Mussells, past president of the Association and chairman of the committee responsible

for the financing and construction of the new building; Dr. Michael J. Crompton, CDA president; and Dr. Frank Shuler, president of the American Dental Association.

Following the unveiling of the plaque, Dr. Crompton addressed the gathering. He noted that the move of the CDA headquarters from Toronto to Ottawa enables the management of the Association to be in closer proximity to government agencies and head offices of other professional groups in the health service field and will improve communication between the dental pro-

fession and other bodies concerned with health care in Canada.

The new two-storey building is located at 1815 Alta Vista Drive, immediately north of the Canadian Medical Association's headquarters. The highly attractive steel framed, brick faced structure is complemented by a landscaped, parklike setting with a wooded ravine in the rear. The new Ottawa headquarters provides ample space for the broad range of services supplied by the Association to its members and for the many programs directed to improved dental health in which the CDA is involved.



On hand for the special ceremony marking the official opening of the Canadian Dental Association's Ottawa headquarters on March 10, 1977, were (left to right): Lloyd A. Stevenson, CDA Executive Director; Dr. Frank F. Shuler, President of the American Dental Association; Marc Lalonde, Minister of National Health and Welfare; Dr. Frank P. Bowyer, ADA President-elect; and Dr. Lindsay Mussells, Past President of the CDA and chairman of the committee responsible for the financing and construction of the new building.

ADA CONFERENCE ON ILLEGAL PRACTICE OF DENTISTRY

"Denturism is a hoax on the consumer," Houston dentist Dr. Claude A. Pawelek, president of the Academy of General Dentistry, told participants at the American Dental Association Conference on the Illegal Practice of Dentistry.

The conference, held in Chicago, February 7-9, 1977, was jointly sponsored by the American Dental Association, the Academy of General Dentistry and the Federation of Prosthodontic Organizations. It convened to develop methods of resisting the legalization of denturism — the unqualified as well as illegal prescribing and fabricating of dental appliances by individuals other than licensed dentists. The conference included reports from Canada, where dental technicians may prescribe as well as make dental appliances for the public without any involvement whatsoever from the dental profession and reports from areas in the United States where attempts are being made to legalize this practice.

Dr. Pawelek strongly emphasized that denturism, commonly defended on the basis of lower costs for denture

services, actually would result in "dangerously substandard" services for the nation's poor and elderly. Noting that the Academy has Canadian members who have reported on the effects of legalizing denturism, Dr. Pawelek stated, "Precancerous and cancerous lesions go undetected, patients are being fitted with dentures that are useless or damaging and serious oral conditions are left untreated."

Comparing the concept of proper diagnosis, treatment and prescription of prosthetic devices by a qualified, licensed dentist to the "vending" of dentures, Dr. Pawelek predicted, "The poor and elderly would once again be subjected to the very worst that society has to offer. A double standard would again be created, and the poor would *still* lose." He also said that reports from Canada indicate that the "low prices" promised by proponents of denturism when the legislation was proposed have now increased to a level comparable to those charged by regular licensed dentists.

Dr. Pawelek expressed confidence that the solution to the pressure to

change dental practice acts in favor of denturism lies within the profession, saying, "Within the varied structure of American dental practices, there is a great potential for flexibility — the dental profession can adapt to the need and rise to the challenge of providing these services at a price that the poor can afford."

CDHA magazine wins honorable mention

The Canadian Dental Hygienist, official publication of the Canadian Dental Hygienists' Association, was recently accorded an honorable mention in the Golden Pen category of the 1977 International College of Dentists Journalism Competition.

The ICD awards and honorable mentions were presented by Dr. James J. Ficca, president of the International College of Dentists, U.S.A. Section, during the ADA Journalism Conference held in March in Portland, Oregon.



“...but
if you feel
any pain,
take one or two
® 222 * tablets.”

Not every patient needs an analgesic after dental care — but some do, even though you have done everything possible to avoid any patient discomfort.

When a patient is in pain, or when there is a possibility that pain will occur later, suggest ® 222 * tablets.

222 * is a reliable analgesic — you and your patient can depend on it.

INDICATIONS: For relief of mild to moderate pain, fever and inflammation as in influenza, common cold, low back and neck pain, headache, trauma, following dental and surgical procedures.

DOSAGE: Adults — 1 or 2 tablets one to three times daily; Children's dosage, when recommended by a physician: 10 to 14 years, one tablet, one to three times daily; 5 to 10 years, one-half tablet, one to three times daily.

CONTRAINDICATIONS: Gastrointestinal ulceration and sensitivity to any of the components.

WARNINGS: Salicylates increase the effects of anticoagulants. Caution is necessary when salicylates and anticoagulants are prescribed concurrently. Also, salicylates may depress the concentration of prothrombin in the plasma. Large doses of salicylates may affect insulin requirements of diabetics. Salicylates may potentiate sulfonyleurea hypoglycemic agents. Analgesic abuse (excessive and prolonged therapy) has been associated with nephropathy. TO AVOID

ACCIDENTAL POISONING ACETYSALICYLIC ACID PREPARATIONS MUST BE KEPT WELL OUT OF REACH OF CHILDREN.

PRECAUTIONS: Give with caution to patients with asthma, other allergic conditions, bleeding tendencies, or hypoprothrombinemia. Salicylates can produce changes in thyroid function tests.

Observe care in use of codeine, although tolerance and addiction are rare. Give codeine with caution to patients with severe respiratory depression. Its depressant effect may be enhanced by concurrent administration of sedatives and tranquilizers.

ADVERSE REACTIONS: Acetylsalicylic acid: *Gastrointestinal:* dyspepsia, heartburn, nausea, vomiting, diarrhea, gastrointestinal ulceration and bleeding. *Ear reactions:* tinnitus, hearing loss. *Hematologic:* anemia, leukopenia, thrombocytopenia, purpura. *Dermatologic and Hypersensitivity:* urticaria, angioedema, pruritus, various skin eruptions, asthma and anaphylaxis. *Miscellaneous:* mental confusion, drowsiness, sweating and thirst.

Codeine: Average or large doses may cause various gastrointestinal symptoms such as nausea, vomiting and constipation.

Caffeine: May cause nausea, nervousness, insomnia, headache, vomiting, palpitation, vertigo, muscle tremor, sensory disturbances, excessive diuresis in sensitive patients. Large doses may cause gastric ulceration.

FULL INFORMATION AVAILABLE ON REQUEST

HOW SUPPLIED

® 222* Tablets — White, scored, engraved 222 on one side. Each tablet contains: acetylsalicylic acid 375 mg, caffeine citrate 30 mg, codeine phosphate 8 mg. Available in tubes of 12; bottles of 40 and 100; also bottles of 60 with safety cap.

*Trademark



(MC-390a)

Frosst

FOUNDED IN CANADA IN 1899
CHARLES E. FROSST & CO
KIRKLAND (MONTREAL) CANADA

HOSPITAL FOR SICK CHILDREN FOUNDATION AWARDS FUNDS FOR RESEARCH TO CFDE

The Board of Directors of the Hospital for Sick Children Foundation has approved funding of "A Study of the Properties of Normal and Healing Mandibular Bone" until March 31, 1978, according to a recent announcement by John W. Neilson, D.D.S., Board Chairman of the Canadian Fund for Dental Education.

"This research project now in progress at the University of Toronto under the direction of Dr. D. C. Smith, Professor of Dental Materials Science, was commenced in October 1975 with the aid of a Foundation grant of \$18,000," said Dr. Neilson. "Objective of the research is to contribute to an improved clinical treatment procedure in children

following fracture or osteotomy of the jaws. It is anticipated that the results of this research will be of immediate clinical benefit in the treatment of congenital malformations and mandibular fractures. It has been estimated that at least 500 such operations are performed per annum in Toronto alone. This study is also basic to the use of mandibular implants. It is expected that work on this promising project will be completed in 1978."

"The Foundation's tangible interest in dental science is most encouraging to all of us connected with education and research and we are deeply grateful to the Directors for their continuing generous help," said Dr. Neilson.

NEW REGISTRAR APPOINTED FOR B.C. COLLEGE OF DENTAL SURGEONS

Dr. Roy Thordarson has been appointed Registrar of the College of Dental Surgeons of British Columbia, succeeding Dr. R. B. Telford who has returned to full-time practice. In addition to the Registrar's duties, Dr. Thordarson will co-ordinate educational activities of the College, particularly auxiliary education programs.

A 1962 dental graduate of the University of Manitoba, Dr. Thordarson practised for three years in British Columbia before entering the graduate periodontics department at the University of Washington. Since 1967, he has practised as a periodontist in West

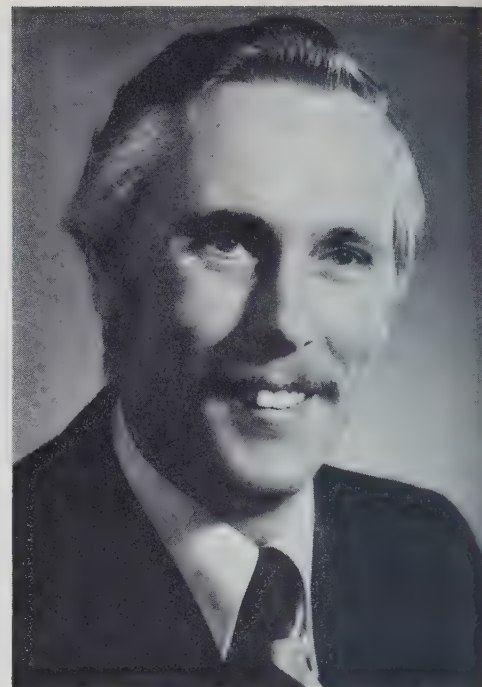
Vancouver.

Dr. Thordarson was a member of the Council of the College and of its Education Committee from 1971 to 1973. He has served as chairman of the Specialty Examination Committee and the Examination Evaluation Committee as well as being College representative to the B.C. Medical Centre Professional Advisory Committee. He also served as president of the B.C. Society of Periodontists and secretary of the Dental Inter Specialty Society. He has taught at both the University of Washington and the University of British Columbia dental schools.

NOTICE

An advertisement containing comparative statements and reports of clinical studies was printed in the March issue of the Journal in error.

The concept of this advertisement was not in agreement with the standards on advertising of the Canadian Dental Association.



Dr. E. G. Sonley

Royal College of Dentists of Ontario

Dr. Edward G. Sonley of Willowdale, Ontario, has been elected President of the Royal College of Dentists of Ontario. He succeeds Dr. R. Paul McCutcheon of London.

A native of Toronto, Dr. Sonley was a 1956 honors graduate of the University of Toronto's Faculty of Dentistry and the recipient of six scholarships and awards. Since 1960, he has been very active in the affairs of the Faculty and represents it on the Council of the College. He is a past president of the North Toronto Dental Society and has chaired several committees of the Ontario Dental Association.

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association Retirement Savings Plan stood as follows on February 28, 1977.

<i>Common Stock Fund</i>	27.991
<i>Fixed Income Fund</i>	19.093
<i>Guaranteed Fund</i>	13.424

Total assets (market value) of the plan were \$24,206,227.86

For further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ont. M5R 2P2.

In memoriam

Ernest Fraser Allen

It is with regret that the Canadian Dental Association announces the death of Ernest Fraser Allen of Vancouver on January 10, 1977, at the age of 78.

Dr. Allen was born in Walkerville, Ontario, and received his DDS from the University of Toronto in 1923. He practised dentistry in the City of Vancouver for 43 years and was a past president of the British Columbia Dental Association. He also served as secretary treasurer of the Vancouver and District Dental Society for 10 years.

Dr. Allen was a veteran of both World Wars. During the Second World War, he served as Assistant and Director of Dental Services with the rank of Lieutenant Colonel and was awarded the Order of the British Empire.

DEATHS

Brault, Jean-Charles, 78. St. Lambert, Quebec, University of Montreal, 1923, 25-11-76.

Cowan, Margaret Irene, 65. Newton Robinson, Ontario. University of Toronto, 1935. 10-1-77. Survived by Robin Sherman (daughter) and Russell Hann (son).

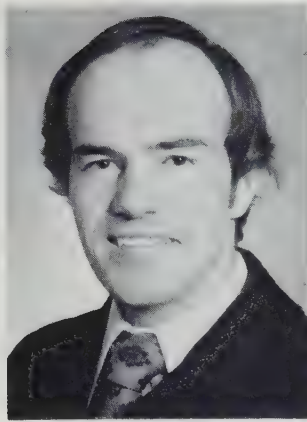
Erhardt, Ronald Walter, 45. Niagara Falls, Ontario. University of Toronto, 1954. 2-3-77. Survived by Patricia Anne (wife), Sherry (daughter) and Christopher (son).

MacLaurin, John Chisholm, 80. Toronto, Ontario. Royal College of Dental Surgeons, 1915. 31-1-77.

Murphy, George Newman, 76. Sudbury, Ontario. University of Toronto, 1929. 23-12-76.

CDA Board of Governors

The Board of Governors of the Canadian Dental Association will hold its Annual Meeting September 29-30, 1977, at Delta's Inn of the Provinces, 360 Sparks St., Ottawa, Ont.



Hi!

I'm Paul Greenacre. I'm a hard-working GP like most of you, with a wife, two kids, a mortgage, and patients who start at 7:30. And as if that weren't enough, I'm also editing the CDA's monthly cassette program of continuing education. We've renamed it "Dentafacts". I want to tell you about it.

First, it's new and different. There's so much happening in dentistry that continuing education is a must. But dentistry is a business as well as a profession, and there's no use learning about osseous implants if you're going bankrupt from poor practice administration. So Dentafacts is coming on strong with practice admin., staff problems, solo and partnership tips, money management and other practical business information, as well as information on a wide range of topics like new materials, new techniques, pain control, crown & bridge, and preventive dentistry.

This is information I want for my practice, and I want you to have it too. Cassettes are an easy way to get it. You can listen while driving your car, or relaxing in the evening. Cassettes don't make inroads into productive time. And provinces with relicensure requirements give study credits for Dentafacts.

So come join me with Dentafacts, by mailing the coupon below. I guarantee you'll get your money's worth - and the money is tax-deductible.

Sincerely,

Paul Greenacre

Dr. Paul Greenacre of Dentafacts
43 Eccles Street
Ottawa, Ont. K1R 6S3

- ☐ Yes, I want Dentafacts. I enclose my cheque for \$79 for a one-year subscription. (Ontario residents add 7% Provincial Tax)
- ☐ Send me information on SONY cassette recorders at special, money-saving prices.

NAME (print)

ADDRESS (print)

EXCITING SOCIAL PROGRAM HIGHLIGHTS CONGRESS PLANS

Toronto enjoys a reputation as a great convention city and delegates to the 65th Annual World Dental Congress of the Fédération Dentaire Internationale, to be held October 22-28, 1977, will discover that reputation is well founded. This will mark the first time a World Dental Congress has ever been held in Canada and the Canadian Dental Association is very proud of its role as sponsor to this unique event.

The scientific program, outlined in the last issue of the Journal, will be complemented by an exciting calendar of social events.

The opening ceremonies officially launching the Congress will be held at 7:00 p.m. on Sunday, October 23. The formal program will be followed by a wine and cheese party featuring entertainment and a relaxed atmosphere conducive to renewing old friendships and creating new ones.

The highlight of the social program will be the Congress Dinner and Ball on Tuesday evening, October 25. This formal event will feature a gourmet dinner and dynamic entertainment, followed by dancing to one of Canada's outstanding dance orchestras.

A "Canadian Hoedown", to be held on Wednesday evening, is billed as an informal fun night with the accent on friendly mingling, fine food, top notch entertainment and dancing.

A full program to entertain the ladies

Don't wait. Register now

Don't wait. Since Congress attendance figures are expected to reach record levels, early pre-registration is strongly recommended. For your convenience a registration and hotel reservation form is included at the back of this issue. Fill it out and return it, with your cheque, today.

is also in the final stages of planning, featuring an Autumn luncheon and fashion show, a theatre visit, and tours of the city and its Harbour. Trips outside the City are also planned to such places as Niagara Falls, the McMichael Gallery in Kleinberg, and to various antique centres in rural Ontario.

Congress delegates will have no

difficulty filling their leisure time in Toronto. In fact, their problem will be just the opposite — finding enough time to see everything the City has to offer.

Toronto has something for everyone and guarantees no visitor will go home disappointed. Plan now to attend the World Dental Congress in October. It will be an event you won't soon forget.



Mr. Art Gee, Regional Manager of Denco and chairman of the committee organizing the set up and operation of a special radio station for the 65th Annual World Dental Congress to be held in Toronto.

RADIO STATION A FEATURE OF CONGRESS

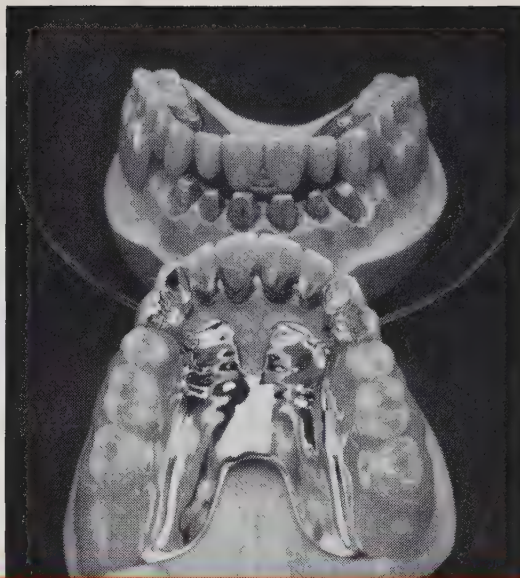
Several dentists in the Toronto area who are amateur radio operators have undertaken to set up and operate a radio station during the 65th Annual World Dental Congress. These "hams" will be the hosts to dentists from many other countries who are also radio amateurs.

The call letters of the radio station, which will be located on the mezzanine floor of the Automotive Building, will be VE3-DDS. World-wide communication will be possible provided radio and atmospheric conditions are favorable. Special equipment will be in operation, demonstrating the use of local "repeater stations" from base stations and mobile units.

Licensed amateurs from countries

around the world will be encouraged to operate the station during the Congress. Where legally possible, dentists attending the Toronto Congress will be able to take advantage of the facilities to make contact with relatives and friends at home. Foreign "hams" will have an opportunity to meet and enjoy the hospitality of local radio amateurs.

This will be a first for an FDI Congress and, to commemorate this unique event, special QSL cards will be available from station VE3-DDS. Further information can be obtained from the Committee Chairman, Mr. Art Gee, VE3-DHQ (dental headquarters), c/o Denco, P.O. Box 2780, Don Mills, Ontario M3C 3G1.



A MARI USQUE AD MARE: FROM SEA TO SEA



Wherever you practice there is a Nobilium laboratory nearby . . . ready to process your partials with the "aristocrat of chromium alloys" . . . partials that satisfy every patient desire for dependable fit, functional service, oral comfort and lifelike aesthetics. Here is the list of skilled laboratories from British Columbia to Nova Scotia equipped with the latest Nobilium equipment and materials and dedicated to serve your every requirement. Entrust your prescriptions to them with confidence.

ONTARIO — TORONTO

Duracast Dental Laboratories
8 Taber Road, Rexdale

Hirsh Dental Laboratories Limited
495 Adelaide Street West

Modent Dental Laboratory
881 Eglinton Avenue West

Pearce Dental Lab
250 Lawrence Avenue West

**The Posen & Furie
Dental Laboratories Limited**
1366 Bathurst Street

Walter Wood Dental Laboratories
527A Bloor Street West

ONTARIO — HAMILTON

**Allen & Rollaston
Dental Laboratory**
Medical Art Bldg., Hamilton 20

ONTARIO — St. CATHARINES

J. W. Birnie Dental Lab.
206 King Street

ONTARIO — CAMBRIDGE

Achmann Dental Lab.
87 Grand Ave. South

ONTARIO — ORILLIA

Orillia Dental Laboratory
225 West Street North

ONTARIO — OSHAWA

Multi-County Dental Laboratories
172 King Street East

BRITISH COLUMBIA — VANCOUVER

**Northwest Dental Laboratories
Limited**
1070 Homer Street

BRITISH COLUMBIA — VICTORIA

Turner Dental Laboratory
1207 Douglas Avenue, Suite 521

NOVA SCOTIA — AMHERST

**Walter Horton
Dental Laboratories Limited**
31 La Planche Street

ALBERTA — CALGARY

Pro-Dent Lab. Ltd.
6707 Elbow Drive S.W.

Frame Master Lab.
339 - 6th Avenue S.W.

MANITOBA — WINNIPEG

**Associated Crown & Bridge
Laboratory, Limited**
201 - 407 Graham Ave.

Manitoba Dental Labs.
333 Kennedy St.

ALBERTA — EDMONTON

Northwest Dental Laboratory
10540 - 115th Street

Universal Dental Laboratories Ltd.
10066 Jasper Avenue

New-Johnston Dental Labs.
10202 - 102 Street

SASKATCHEWAN — SASKATOON

Ceramic Dental Labs. Ltd.
304 Canada Building

QUEBEC — STE. THERISE

Lafond & Joly Dental Lab.
94 Blainville Quest

QUEBEC — GRANBY

Julien-Ste. Jean Dental Lab.
356 Rue Principale

QUEBEC — MONTREAL

Dentarium Laboratories
6997 Victoria Avenue

Nobident Dental Laboratory
3726 Jean-Talon West

Roger Sauve Dental Laboratory
5545 Beaubien Est

QUEBEC — QUEBEC CITY

G. Garneau Dental Lab.
386 Dorchester, Sud

NOBILIUM PRODUCTS OF CANADA, LIMITED 1366 BATHURST STREET, TORONTO 4, CANADA

Instructions to Contributors

The Journal of the Canadian Dental Association is currently soliciting research and clinical articles for publication. Interested contributors are asked to use the following outline of requirements when preparing manuscripts.

Manuscripts: Manuscripts should be submitted to the editor with a covering letter requesting consideration for publication in the Journal. Send two copies — original and a carbon — typewritten with all material (text, quotations, tables, legends, references, etc.) double-spaced, on one side of the sheet, $8\frac{1}{2} \times 11$ inches, with ample margins on all four sides. The author should always retain a carbon copy of material submitted. Every article should contain a summary of the contents.

Original articles are considered and accepted subject to the understanding that they are submitted solely to this Journal, and will not be reprinted without the consent of both the editor and the author.

The editor reserves the right to fit articles within the space available and to make usual editorial alterations in manuscripts; these include such changes as are necessary to ensure correctness of grammar and spelling, clarification of obscurities or conformity to Journal style. In no case will major changes be made without prior consultation with the author. The senior author will receive either the edited manuscript or galley proofs for checking prior to publication.

Article Titles Make article titles descriptive but as concise as possible. Long titles discourage reading, present

typographical and layout problems and create difficulties in library indexing.

References: Authors should limit references to published work to the minimum necessary for guidance to readers wishing to study the subject further. They should not quote articles they have never seen. Except in review articles, the maximum number of references should not be more than 25. References should be numbered in the text and should be set out in a separate numbered list at the end of the article.

For journal references, give the author's name, article title, journal name, volume number, first page of article, and year of publication:

1. Gibb, G. H. Methods of achieving improved amalgam restorations. *J Canad Dent Ass* 30:413, 1964.

For books give the author's name, book title, location and name of publisher, year of publication:

2. Kilpatrick, H. C. Work simplification in dentistry. Ed. 2. Philadelphia, Saunders, 1964.

Illustrations: Line and halftone illustrations should be of high quality for satisfactory reproduction.

Photographs — Handle photographs carefully. Do not bend, fold or use paper-clips. Photographs should be unmounted, untrimmed, good, sharp, black and white glossy prints, preferably not larger than 10×8 inches. Color work can only be published at the author's expense. Magnification of photomicrographs must always be given. Photographs must not be written on or typed on. On the back of each photograph, very lightly and in pencil, write the author's name, the figure number and indicate the top edge. If a

figure contains two or more photographs, do not mount the parts; on the back of each photograph write very lightly in pencil the figure number and part letter (Figure 1a, etc.) and indicate the top edge. Patients must not be recognizable unless the written consent of the subject to publication has been obtained.

Drawings — Figures, graphs, charts and diagrams should be drawn and lettered in india ink. Lettering must be large enough to be read after the drawings are reduced to column width (small, simple drawings) or page width (larger, more complex drawings).

Legends — Figure legends should be typed as a group on a separate sheet. They should be separate from the text of the article and from the illustrations.

Tables: Each table should be typed on a separate sheet. Tables should be numbered consecutively and tailored to fit within column width or page width. Table title and table footnotes should be on the same page with the table. Do not show vertical rules in tables.

Permission and Waivers: These should accompany the manuscript when it is submitted for publication. Permission of author and publisher must be obtained for the direct use of material (text, photos, drawings) under copyright that is not your own. Up to one hundred words of prose material usually can be quoted without getting permission, provided the material quoted is not the essence of the complete work. Waivers must also be obtained for the publication of photographs showing persons, unless faces are masked to prevent identification. Waiver forms are available from the editor.



Buffalo's selection of finely crafted stainless steel forceps includes English and American patterns, each precisely designed and balanced for specific surgical techniques. With a lifetime guarantee against breakage, Buffalo forceps represent exceptional value in superior quality dental instruments. Available for immediate delivery through your dealer.

NOVOCOL-BUFFALO of Canada, Ltd.
52 Chauncey Ave., Toronto M8Z 2Z4 Ontario

Now we have it for you...

Efficiency, convenience, flexibility and comfort — your practice requires the maximum of each.

From an awareness of your requirements Siemens has designed the ultimate patient chair and instrument delivery system.

SL3 Patient Chair

- harmonious in form and function with flexible positioning and easy controls.
- designed for the comfort of both doctor and patient.

S5 Instrument Delivery System

- compact and easily adjustable to your working posture, standing or sitting.
- modular system permits you to select the instrumentation package you need.
- instruments are always accessible and easy to reach.



For further information contact your dealer; or write or call Siemens Electric Limited
George Grignon
7300 Trans-Canada Highway
P.O. Box 7300 Pointe Claire
Quebec H9R 4R6
Tel.: (514) 695-7300

SL3 Patient Chair

S5 Instrument Delivery System

Report of a case:

REMOVAL OF AN ANTRAL DENTIGEROUS CYST VIA A MODIFIED CALDWELL-LUC

Arthur A. Friedlander, DDS,
Northport, N.Y.

A review of the histogenesis of dentigerous cysts and a modification of the classical Caldwell-Luc procedure for their removal from the antrum has been presented. By adhering to the basic surgical principles of not placing soft tissue incisions over bony defects and maximizing surgical access, morbidity associated with this procedure has been reduced. The mucosal incisions allowed for the introduction of a gold-foil plate for obturation of an associated oro-antral fistula. In addition, a technique which brings a nasal mucosal flap consisting of healthy respiratory epithelium into the surgically denuded antrum has been described.

Dentigerous cysts account for one-third of all odontogenic cysts and 95 per cent of all follicular cysts.¹ The cysts may occur in any portion of either jaw, with 30 per cent found in the maxilla. The maxillary cuspid is more frequently involved than is the maxillary third molar.

The histogenesis of a dentigerous cyst begins with the formation of fluid between the reduced enamel epithelium and the fully calcified coronal enamel and dentin. These cysts are always associated with the crown of an unerupted tooth. The dentigerous cyst is potentially capable of becoming the most aggressive of all odontogenic cysts.² Clinically it may manifest itself as a marked bony expansion with facial asymmetry, root resorption and pain. Its histopathologic potential for neoplastic epithelial proliferation is greater than all other odontogenic cysts. While 80 per cent of the connective tissue walls of these cysts contain inactive odontogenic epithelium, as many as 6 per cent show a nodular ameloblastic proliferative thickening of the cyst wall, which may be a precursor to an ameloblastoma. In a review of the literature, Chretien³ and Lapen⁴ have found six well-documented cases of squamous cell carcinoma occurring within a dentigerous cyst.

The initial treatment of the cyst requires that the patient be reassured that the growth in his jaws is not likely to be a cancer. At the same time, it is important to discuss with the patient the possibility of a pathologic fracture or impingement by the cyst on nearby vital structures if adequate

treatment is not commenced. The usually noted modalities of treatment include an unroofing (Partsch/ marsupialization) procedure in which the oral bony wall is removed and the cyst lining is sutured to the oral mucosa. This method, which allows for cystic decompression with consequent bony regeneration, diminishes the possibilities of pathologic fracture or damage to contiguous structures, but requires a delayed second procedure for total removal of the cystic epithelium. Noting the potentiality of the dentigerous cyst to undergo neoplasia, adequate exposure should be made so that the cyst lining may be visualized and any suspiciously thickened or roughened areas be biopsied.⁵

The bone in the maxilla which is thinner than that of the mandible offers less resistance to the internal hydrostatic cystic pressure and thus allows for the cyst's encroachment into adjacent regions before symptoms develop. The decreased bony resistance also allows the involved tooth to be displaced a great distance from its original position. Localization and radiographic interpretation of these cystic lesions is made all the more difficult because of the normal anatomic pneumatized cavities of varying sizes which are found in the upper jaw. In addition, the maxilla contains nasal and antral mucosa, both of which are ectodermal derivatives and may participate in the cystic process.

Dental and oral surgical literature is replete with descriptions of the removal of odontogenic antral pathology. Most reported cases have involved an oral antrostomy alone or an oral antrostomy in conjunction with a blind intra-nasal antrostomy. Descriptions for removal of similar pathologic conditions may be found in most otolaryngology texts⁶ and in the standard atlases of head and neck surgery.^{7,8} The incision advocated for entrance into the antrum from the lateral aspect of the maxilla is either a horizontal incision or a horizontal incision in conjunction with two vertical oblique incisions in the cuspid and second molar areas. The height of the horizontal component varies depending on the texts consulted. Kruger⁵ recommends an incision several millimeters above the gingival attachments of the teeth, while Boies⁹ suggests a horizontal soft tissue incision at the depth of the mucobuccal fold in the canine fossa.

Our modifications of the classical Caldwell-Luc procedure places all soft tissue incisions at a sufficient distance from possible bony defects, thus decreasing the incidence of a wound dehiscence or a naso-oral fistula while increasing surgical access for visibility and instrumentation. These modifications also allow for the placement of a gold foil plate, which is a most successful method for closing an associated oro-antral fistula.¹⁰ Modification of the nasal antrostomy allows for the introduction of a healthy respiratory epithelial lining with its periosteum into a sinus whose entire lining may have required complete removal.

Case report

A 30 year old white male was referred to the oral and maxillo-facial surgery section of the dental service by his otolaryngologist for closure of an oro-antral fistula. The fistula had been present for the past six months and had developed one week after the extraction of a cariously infected left first molar tooth. Oral examination revealed purulent drainage from the fistula site and that the maxillary left third molar tooth was missing.

Panographic examination of the jaws revealed that the missing maxillary third molar was embedded in the posterior wall of the sinus (Fig 1). Tomograms taken in the Waters' projection showed a diffusely opacified left maxillary antrum whose walls were displaced medially and superiorly with a 1.5 cm opaque mass at the lateral antral wall (Fig 2).

On admission, physical examination and laboratory data were grossly normal. The patient was started on a course of ampicillin 500 mg and Benadryl 50 mg both administered orally every six hours. Afrin nasal spray was directed to both nari every four hours.

On the fifth hospital day, the patient was taken to the main operating room and was prepared in the usual manner with a general anaesthetic delivered via a naso-endotracheal tube placed in the uninvolved naris. A full thickness mucogingival flap was raised from about the neck of the lateral incisor tooth, on the contralateral side, around to the most posterior molar tooth on the side of the antral pathology (Fig 3). An anterior releasing incision allowed for reflection of the flap just superior to the anterior nasal spine and inferior to most aspects of both pyriform apertures. On the ipsilateral side, the flap was raised to the infraorbital foramen with its nerve identified and protected. An optional posterior vertical oblique releasing incision was employed so that the entire lateral antral wall could be visualized. The associated oro-antral fistula was excised so that the leading edge of the flap in the edentulous posterior molar region rested on the alveolar ridge (Fig 4). The extent of palatal tissue undermining required to place the gold foil plate for obturating the oro-antral communication is also shown in Fig 4. Initially, a one-inch diameter bony window was placed through the lateral antral wall in the canine fossa, but additional access was required to remove the tooth and soft tissue mass. Bone was then removed in all directions posteriorly to the malar-maxillary buttress;



Fig 1 Panoramic x-ray showing unerupted maxillary third molar.

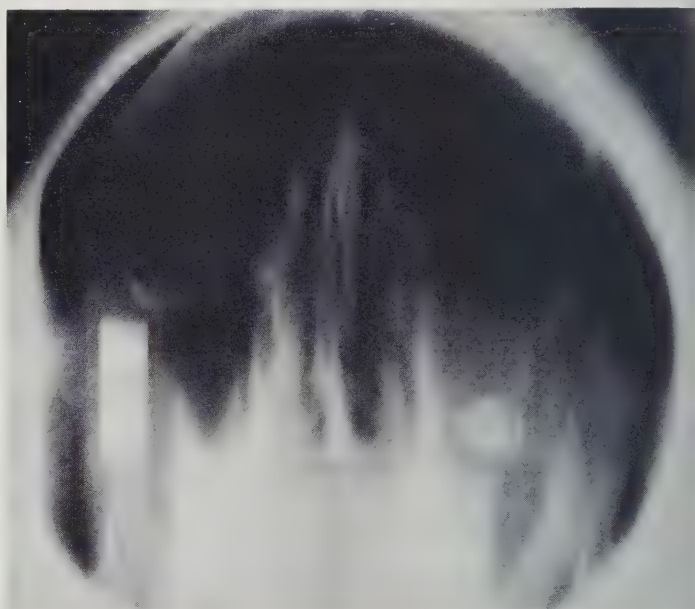


Fig 2 Tomogram in the Waters projection showing the opacified antrum with displaced medial and superior wall, as well as unerupted third molar tooth.

superiorly to just below the infraorbital foramen and inferiorly to within 0.5 cm of the dental alveolus. The soft tissue specimen and tooth were delivered with Molt curets and dental elevators. Visual inspection showed all bony walls of the sinus to be intact. The pathologist interpreted the frozen section as a dentigerous cyst with no ameloblastic elements.

To ensure antral nasal drainage, a periosteal elevator was placed in the naris elevating the ipsilateral inferior turbinate to protect it from surgical trauma. Using utmost care to remove bone only, a 2 cm window in the medial antral wall was made via an approach through the previously removed lateral wall. The base of this bony cut was made at the junction of the sinus floor and medial antral wall, thus assuring easy evacuation of sinus contents into the nasal cavity. This bony window was constructed utilizing curved osteotomes and an off-angle rongeur (Wagner's antrum

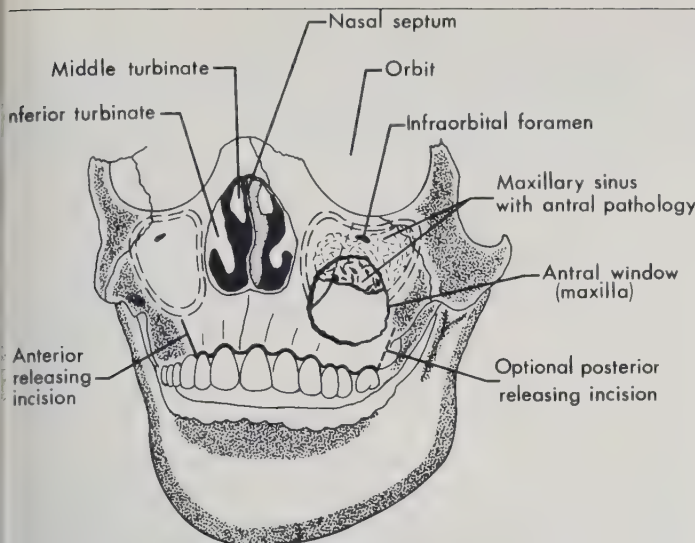


Fig 3 A full thickness mucogingival flap is raised from about necks of teeth with the anterior releasing incision on the side opposite the antral pathology.

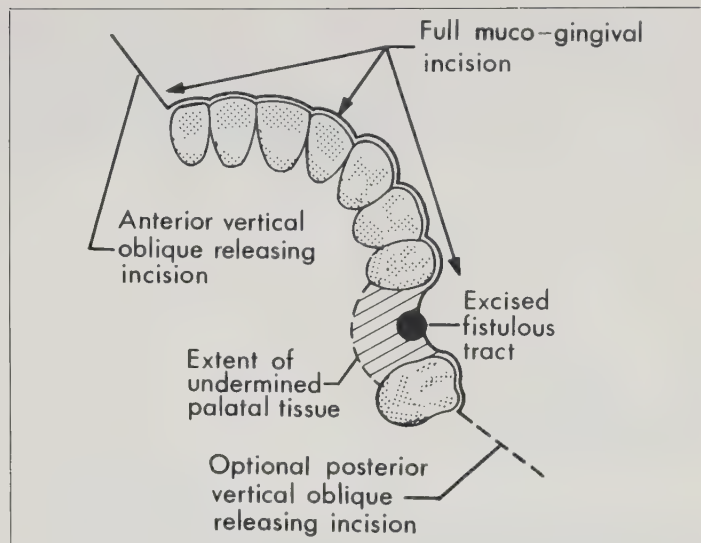


Fig 4 Mucogingival flap brought onto edentulous alveolar ridge, site of excised associated fistulous tract.

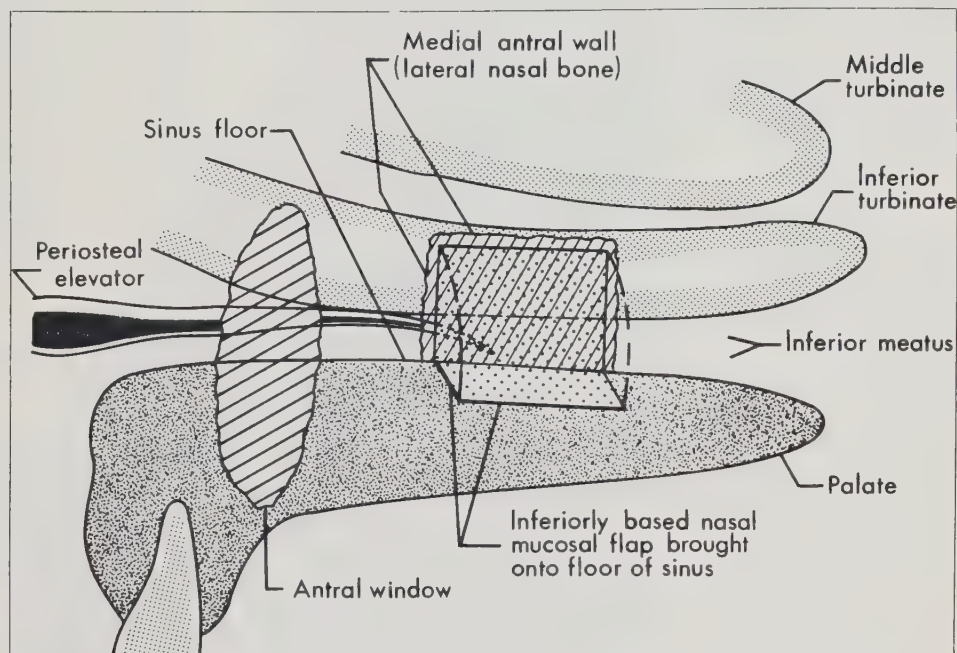


Fig 5 Nasal cavity and sinus as viewed from lateral aspect. Note periosteal elevation retracting inferior turbinate superiorly, with bony window having been removed from medial antral wall and nasal mucosal trap door flap having been brought onto the floor of the sinus.

lunch). The intact and healthy nasal mucosa was then brought into the antrum via an inferiorly based "trap door" flap which was prepared with a No. 11 Bard Parker blade (Fig 5). Gel-foam cubes were placed over the flap to avoid haematoma formation. A gold-foil plate was fashioned in a bridge lap manner and set into place under the palatal and buccal flaps. All mucosal incisions were then closed with 4-0 black silk sutures.

Postoperatively, the patient was continued on his regimen of antibiotics, antihistamines and nasal decongestants. Intermittant use of ice packs for 48 hours was ordered. There was no associated postoperative haemorrhage. The patient has been followed up for 24 months and remains free of sinus disease.

Dr. Friedlander directs the Oral and Maxillofacial Surgical Services provided by the Dental Service of the Veterans Administration Medical Centre at Northport, New York; and is assistant professor of Oral Surgery at the School of Dental Medicine, State University of New York at Stony Brook, New York.

1. Bhaskar, S. N. Synopsis of oral pathology. Ed. 3. St. Louis, Mosby, 1969.
2. Shafer, W. G., Hine, M. K. and Levy, B. M. A textbook of oral pathology. Ed. 2. Philadelphia. Saunders, 1963.
3. Chretien, P. B., Carpenter, D. F., White et al. Dentigerous cyst: presentation of a fatal case and review of four previously reported cases. Oral Surg 30:809, 1970.
4. Lapen, R., Garfinkel, A. V., Catania, A. F. et al. Squamous cell carcinoma arising in a dentigerous cyst. J Oral Surg 31:354, 1973.
5. Kruger, G. O. Textbook of oral surgery. Ed. 3. St. Louis, Mosby, 1969.
6. Ballenger, J. J. Diseases of the nose, throat and ear. Ed. 11. Philadelphia. Lea & Febiger, 1969.
7. Lore, J. M. An atlas of head and neck surgery. Ed. 2. Vol. I. Philadelphia, Saunders, 1973.
8. Rankow, R. M. An atlas of the surgery of the face, mouth and neck. Philadelphia, Saunders, 1968.
9. Boies, L. R., Hilger, J. A. and Priest, R. E. Fundamentals of otolaryngology: a textbook of ear, nose and throat diseases. Ed. 4. Philadelphia, Saunders, 1964.
10. Mainous, E. G. and Hammer, D. D. Surgical closure of oroantral fistula using the gold-foil technique. J Oral Surg 32:528, 1974.

USE OF THE VITALOMETER WITH RUBBER GLOVES

D. R. King, DDS
A. C. King, PhD
Lexington, Kentucky

Due to the increase of hepatitis and venereal disease in patient populations, rubber gloves are becoming more widely used in dental treatment. It is therefore important to note how this will affect the readings of the vitalometer which is a valuable aid in diagnosis of pulp disease. A study was conducted at the University of Kentucky Dental School and it was concluded that the vitalometer may indeed be used, but statistically significant higher readings are obtained with use of rubber gloves.

The vitalometer has long been established as an important adjunct aiding in the diagnosis of pulp diseases. Any pulp vitality test is highly dependent on an accurate technique. Equally important is the interpretation of the results. Therefore, it is of primary relevance that the test be properly administered. For the vitalometer, after isolation and removal of saliva, this means placement of the tooth electrode on the middle third of the clinical crown. In order to establish the norm for the patient in question, a contralateral tooth must be analyzed so that interpretation may have real meaning. The rubber glove is a variable which is being introduced more and more often, especially for those patients with a history of hepatitis, venereal disease or other contagions. The clinics at the University of Kentucky Dental School are experiencing a rapid increase in such patients — many who will require vitality readings for diagnostic purposes. It is thus of utmost significance that one knows the implication in the use of rubber gloves when testing with the vitalometer.

This study was done to determine what effect, if any, the use of rubber gloves has on vitalometer readings. Often students ask, "Can one actually obtain vitalometer readings while using rubber gloves?" this is a valid question inasmuch as rubber has long been known to be a good insulator.

Materials and methods

Twenty volunteers, including both staff personnel and patients, were secured in the clinics at the University of Kentucky Dental School. There were 10 men and 10 women with ages ranging from 21 to 47. All were informed as to the technique and nature of the investigation. Each patient was tested with a Pelton-Crane vitalometer on a central incisor as well as both buccal and lingual cusps of a

Statistical measures computed for each tooth

Table 1

		Ordinary method	With rubber gloves
Central incisor	Range	1.00 - 2.00	1.20 - 3.50
	Arithmetic average	1.35	1.95
	Standard deviation	.46	.67
Left bicuspid (buccal)	Range	0.75 - 4.00	1.00 - 7.50
	Arithmetic average	2.01	3.14
	Standard deviation	.87	1.42
Left bicuspid (lingual)	Range	1.00 - 4.00	1.50 - 8.00
	Arithmetic average	2.38	3.48
	Standard deviation	.87	1.58

left bicuspid. First, normal hand contact was employed and then the same three contacts were made with the operator wearing rubber gloves. Careful isolation of the tooth and appropriate placement of the electrode were carried out. In every case the participant was to give a gesture the moment he felt any reaction to the vitalometer, such as warmth, tingling, or any discomfort.

Results

Table 1 illustrates the statistical measures which were computed for each tooth.

The standard deviation is a measure of dispersion, i.e. how much the data differ from the arithmetic average. If one measures off three standard deviations on each side of the mean or arithmetic average there is a 99.7 per cent chance that all values will lie in this range. For example, in the case of the central incisor in Table 1, ordinary method, consider $1.35 \pm 3 (.46)$, i.e. 1.35 ± 1.38 . Then we may be 99.7 per cent sure that all values obtained will lie in the range 0 to 2.73.

The standard error of the difference between the two means for all three cases was then computed to determine if the difference we obtained was accidental or if the two values for each mean were statistically significant. In each case there was a true distinction between the readings with and without rubber gloves, which indicates that this dissimilarity was to be expected and not due to the sampling procedure.

Continued on page 186

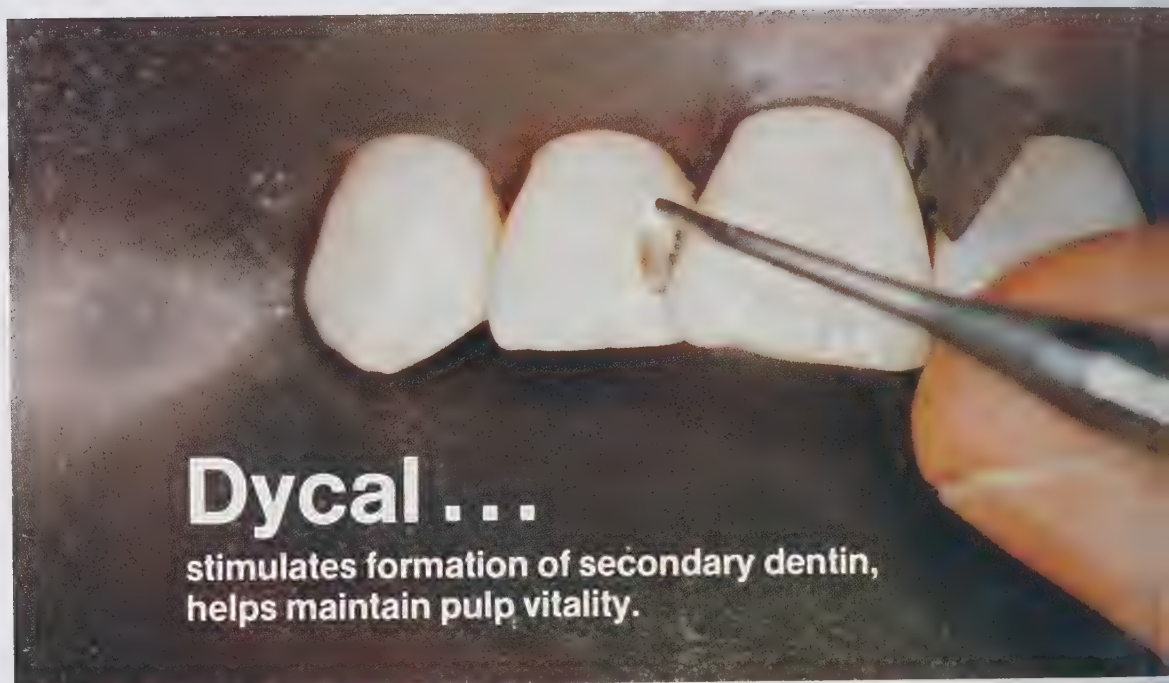
Caulk[®] Dycal[®]

protective base,
pulp cap

Calcium hydroxide
in convenient form and
clinically effective.



For more
information
check number 10 :I



Dycal...

stimulates formation of secondary dentin,
helps maintain pulp vitality.

- Stays where you put it.
 - Sets hard fast for placement of restorative material or intermediary base.
 - Provides a rigid protective base under amalgam, composite, silicate or resin restorations.
 - Safe to place in cases of exposure or near exposure.
 - Radiopaque—there's little chance of ever mistaking it for caries.
- DYCAL—basic in your operatory.

Caulk

making life
a little easier
for dentists

Division of Dentsply International Inc.



For more
information
check number 101

EDUCATION AS A MEANS TO PREVENT DENTAL PROBLEMS FOR THE HANDICAPPED

N. Levine, BA, DDS, MScD, FRCD(C)

J. A. Hargreaves, MChD, LDS

Toronto

Having witnessed the International Olympiad for the Physically Handicapped held in Toronto recently, I am sure that most of the public have been overwhelmed by the skills that these young people from all over the world have been able to develop in spite of their handicaps. Unfortunately, international politics also disrupted this demonstration of skill, strength and, most of all, courage. It was interesting that when I invited several of my professional confreres and their families to join with me as spectators, all said that they "couldn't take it." This was somewhat disturbing to me since my own family was anxious to support the program and attend. To me the message was loud and clear.

Thirty-five years ago the majority of these young men and women would have had a life expectancy of perhaps five to ten years. It took World War II and the subsequent wars in various parts of the world to stress the need for rehabilitation of injured veterans. Programs were developed and from army hospitals these programs were carried to persons with congenital handicaps or other postnatal environmentally caused problems. The result has been well demonstrated by the events of the Olympiad, namely that no person capable of learning should be denied that privilege. The other part of the message was the need for a greater emphasis on public education in every sector of a community. It is to this area and specifically to dental education that I will now comment on.

To a great extent, the dental problems of both the physically and mentally handicapped were dealt with previously at the clinical level when the problems became evident. Also, the majority of the mentally retarded and severe physically handicapped persons were institutionalized, and this removed from society the obligation to render total care and prevention programs since most treatment was carried out in the institutions.

An increasing emphasis is developing on decentralizing large institutions and the integration of the handicapped into community programs and residential homes, which will allow the trainable and educable to live in the community at large. Since these persons along with an increased number of the handicapped living at home will require total health care, the dental profession must be ready to provide a comprehensive diagnostic, treatment and preventive program under normal conditions whenever and wherever possible. This does not imply the ultimate, but rather the

establishment and maintenance of a good functional and esthetic occlusion for most handicapped individuals.

Within the confines of this paper, it is impossible to elucidate all the ramifications of such a program, but let me discuss a six-point plan or objectives:

1. Before the last decade, only a few dental schools offered any curricular subjects or clinical exposure on the handicapped or mentally retarded. Those that did, offered it in an unofficial way through the courtesy of an interested and involved member of the staff. As we move out of the seventies and into the next decade, every dental school worthy of national recognition and certainly international recognition, should have formal lectures and clinics on dental care of the physically and mentally retarded at the undergraduate level. I was once told that this was the domain of the specialist, but throughout the world there are millions of affected persons and only comparatively few dental specialists. Hence, the properly trained, motivated general practitioner must be held responsible for the major role in delivery of dental service to the handicapped population. At the University of Toronto we have such a program and, with few exceptions, the students are keen to have more time in this field. The program, which is compulsory for all undergraduate dental students, consists of the following: (a) video tapes on the management of children with mental and physical handicaps (given in second year); (b) lectures on physical and mentally handicapping conditions with a clinical component where the students actually perform the required treatment (given in third year); and (c) in the final or fourth year, the students have a dental clinical component as well as an elective program for those who wish to spend additional time with these patients. The clinical component of this entire course is carried out in conjunction with the Mount Sinai Hospital Dental Department, which is affiliated with the University of Toronto, Faculty of Dentistry.

The postgraduate students' involvement is at the clinical level at the Mount Sinai Hospital, Ontario Crippled Children's Centre, and the Hospital for Sick Children. There has been an attempt to encourage graduate dentists to enrol in an annual course in dentistry for the handicapped given at the Faculty of Dentistry, University of

Toronto. This has been reasonably satisfactory to date. It is our plan to involve dental assistants and hygienists with the lectures and clinical programs; this program commenced last year with the involvement of George Brown College, the largest of the community colleges in Ontario.

2. Continuing education programs for the upgrading of dental practitioners and auxiliary personnel must be available on an annual basis. A recent survey of Ontario dentists has revealed their interest in this field but because of a deficiency in their undergraduate training there is a reluctance on their part to get involved. Therefore, it is the responsibility of the university to augment their knowledge in this field.
3. Development of literature for both the lay public and allied professions in the health and science disciplines on the importance of optimum dental health for the handicapped. This should be international in scope and distribution. It is interesting to note that the number of articles written in this field has more than tripled in the last five years of this quarter century as compared to the first five years. An interesting example pertaining to the lack of communication between professions, was illustrated by my personal involvement in a conference on mental deficiencies. It was the first time that a dental practitioner appeared on such a program, although almost every other area in the field of health care had been involved previously.
4. Every institution, residence or school, large or small, should have dental health programs. These should be staff, resident and parent oriented, and to be successful, all three must be involved. The Reena Foundation is dedicated to integrating the handicapped into community living. I believe that as professional people, we should be involved in such an organization in order to ensure that all levels of health and welfare are looked after.
5. The dental profession must have input into the standards of dental programs of institutions in terms of staff, institution design, diet counselling, dental care and dental education. Salaries and benefits which are paid to those working in institutions should be reasonably well equated to private practice or other similar vocations to ensure the selection of the best possible personnel.
6. Acquire government funding (national, provincial, state,

etc), so that in spite of any financial cutbacks this heretofore second class citizen will get his equal rights and opportunities within the limits of his capabilities, and the foregoing programs can be developed. To ensure the spending of funds in the most equitable way possible, research programs must be initiated to ascertain problems, requirements and solutions. Only in this way can the priorities be properly perceived.

In summary, the foregoing may be referred to as a "P.P.S." program involving: (1) professional responsibility, (2) parent responsibility, and (3) social responsibility.

Perhaps my empathy in this area was developed long ago before I realized its significance. I had the good fortune to be brought up in a small town where there were two handicapped persons, one with Down's syndrome and one an epileptic, whose parents were even then attempting to integrate their children. Ultimately, society failed them and they were institutionalized. My divided professional career has given me an opportunity to render a service to the community as a practitioner and as an educator to try to develop a sensitivity to this problem in dental personnel and those in related fields. An individual is a person first and handicapped second. All persons, regardless of race, age, social or economic status or degree of disability, are entitled to the opportunity to develop and realize their optimum individual potential. Civilized society must provide such opportunity, assistance, protection and shelter to enable them to integrate into a community with a decent standard of living so that they may go through life with dignity.

Dental practitioners, educators, researchers and administrators from all over the world have a role to play in the attainment of the aforementioned objectives, not merely by working in isolation but at a time when there is strength in unity, of writing and placing resolutions before the World Health Organization and its component members for recognition of the problems and support of beneficial programs for the handicapped.

This paper was presented by Dr. Levine at the Third International Congress on Dentistry for the Handicapped, held in October 1976 in Stockholm, Sweden.

Dr. Levine is assistant professor, Department of Paedodontics, Faculty of Dentistry, University of Toronto; and head, Section of Dentistry for the Handicapped, Mount Sinai Hospital, Toronto.

Dr. Hargreaves is professor and chairman, Department of Paedodontics, Faculty of Dentistry, University of Toronto.

Use of vitalometer . . .

Continued from page 182

Conclusion

The results indicate that the increased use of rubber gloves in the dental profession will not hinder diagnosis by the vitalometer. However, emphasis is placed on the fact that statistically significant higher readings are obtained. Hence, it is extremely important that a contralateral tooth be utilized for comparison, because the unsuspecting practitioner might otherwise believe that the increased reading meant decreased vitality of the tooth. It has therefore been

demonstrated that the vitalometer may be effectively used with rubber gloves in testing those patients who have communicable diseases.

Dr. D. R. King is associate professor at the Department of Oral Diagnosis and Oral Medicine, College of Dentistry, University of Kentucky, Lexington, Kentucky.

Dr. A. C. King is with the Department of Mathematics, Eastern Kentucky University, Richmond, Kentucky.

Expand your diagnostic skills and update your clinical techniques with the help of these new Mosby books

New 5th Edition!

McCRACKEN'S REMOVABLE PARTIAL PROSTHODONTICS

In this new 5th edition, the authors explain the essentials of partial dental service, and provide up-to-date information on design materials and treatment planning. Well illustrated discussions analyze the basics in classification, component parts, rests and rest seats, direct and indirect retainers, and denture bases and stress breakers. Added highlights include: a generously illustrated analysis of biomechanical considerations in removable partial denture design; revised material on periodontal preparation; and other pertinent discussions.

By Davis Henderson, B.S., D.D.S., F.A.C.D. and Victor L. Steffel, D.D.S., F.A.C.D., F.A.D.P., F.I.C.D. April, 1977. 5th edition, approx. 496 pages, 7" x 10", 728 illustrations. About \$19.50.

New 5th Edition!

SYNOPSIS OF ORAL PATHOLOGY

The 5th edition of this well-established resource begins with a series of 12 tables which offers you a quick diagnosis of oral diseases by classifying lesions according to their clinical appearance. Color coded and cross referenced, these tables include the location of the lesion, usual age and sex of the patient, clinical and microscopic features, treatment, and prognosis. Part II discusses the general mechanisms of disease, followed by chapters dealing with diseases as they relate to each part of the oral cavity.

By S. N. Bhaskar, B.D.S., D.D.S., M.S., Ph.D. July, 1977. 5th edition, approx. 672 pages, 4 $\frac{7}{8}$ " x 7 $\frac{3}{8}$ ", 651 illustrations. About \$16.00.

New Volume II!

CURRENT ADVANCES IN ORAL SURGERY

Because you're concerned with the latest techniques in oral surgery, this new Volume II presents 15 topics of current interest and importance in this area. Chosen on the basis of their expertise, distinguished contributors discuss such timely topics as: cardiopulmonary resuscitation; the pathophysiology of head injuries; primary care of the acute trauma patient; facial pain; and alloplastics in oral surgery.

Edited by William B. Irby, D.D.S., M.S.; with 16 contributors. October, 1977. Approx. 576 pages, 7" x 10", 332 illustrations. About \$43.45.

New 4th Edition!

DENTAL RADIOLOGY

Concise yet complete, this expanded 4th edition describes both the production and interpretation of radiographs. It explains the fundamentals of radiology in full, including the history of the machine itself, as well as factors relating to the production of the radiograph. Chapters include such topics as patient management, the radiographic survey, and common diseases of the teeth and supporting structures.

By Arthur H. Wuehrmann, D.M.D., A.B. and Lincoln R. Manson-Hing, D.M.D., M.S. April, 1977. 4th edition, approx. 512 pages, 6 $\frac{3}{4}$ " x 9 $\frac{3}{4}$ ", 404 illustrations. About \$23.00.



MOSBY
TIMES MIRROR

THE C. V. MOSBY COMPANY, LTD.
86 NORTHLINE ROAD
TORONTO, ONTARIO
M4B 3E5

Report of a case:

CARIES UNDER AN OCCLUSAL SEALANT

A. S. Richardson, DDS, MSc
Vancouver, B.C.

Since their introduction by Roydhouse¹ and Cueto², fissure sealants have made considerable progress in becoming an accepted preventive material.³⁻⁵ Recent clinical trials⁶⁻⁸ have produced encouraging results. However, for many clinicians one question remains: What happens to occlusal dental caries when the surface is coated with an adhesive sealant material? The following case is of interest to those concerned.

A seven-year-old boy, who was participating in a fissure sealant study, was examined for occlusal caries with mirror and explorer in a school clinic. His mandibular first permanent molars were recorded as "sticky" and deemed suitable for the study. Using the acid etch technique, a pink-coloured, chemically curing sealant* was placed on the occlusal surface of the right molar, leaving the left molar to serve as a control. Four months later, bitewing radiographs taken by the family dentist revealed occlusal caries in both mandibular first permanent molars at equal depths (Fig 1). The extent of the caries indicated that caries must have been present at the initial examination. The non-sealed molar was restored with silver amalgam. The sealed molar was re-examined visually and radiographically at four and nine-months' duration (Fig 2). The radiographs did not indicate any increase in the depth of the caries. The occlusal sealant remained intact.

Thirteen months after the sealant was placed, the tooth was restored. With rubber dam in place, the caries was exposed and three samples taken at various depths for bacteriological evaluation. A fourth sample was taken from some buccal pit caries on the same tooth. After complete caries removal, a base was placed and the tooth was restored with a radio-opaque composite (Fig 3). The aerobic bacteria counts were low for all samples; much lower than one would anticipate for active caries. The depths of the two restorations were comparable, although radiographically the

amalgam restoration in the left molar appeared deeper, due to a buccal pit restoration.

Discussion

This case suggests that the placement of a sealant on occlusal surfaces containing undetected caries is not as serious as once feared. The caries in a sealed first permanent molar over a nine month period did not appear to progress clinically. The low bacteria counts could have been due to a technical error which destroyed the organisms in the samples, or they could indicate an actual reduction in the number of aerobic organisms, thus supporting Handelman's findings.⁹

Dr. Richardson is associate professor at the Department of Restorative Dentistry, Faculty of Dentistry, University of British Columbia, Vancouver.

1. Roydhouse, R. H. Prevention of occlusal fissure caries by use of a sealant: a pilot study. *J Dent Child* 35:253, 1968.
2. Cueto, E. I. and Buonocore, M. G. Sealing of pits and fissures with an adhesive resin: its use in caries prevention. *J Amer Dent Ass* 75:121, 1967.
3. McLean, J. W. and Wilson, A. D. Fissure sealing and filling with an adhesive glass ionomer cement. *Brit Dent J* 136:269, 1974.
4. Buonocore, M. G. Caries prevention in pits and fissures sealed with an adhesive resin polymerized by ultraviolet light: a two-year study of a single adhesive application. *J Amer Dent Ass* 28:1090, 1971.
5. Roydhouse, R. H. and Richardson, A. S. The current clinical status of fissure sealants. *J Canad Dent Ass* 6:38, 1972.
6. Cons, N. C., Pollard, S. T. and Leske, G. S. Adhesive sealant clinical trial: results of a three-year study in a fluoridated area. *J Prevent Dent* 3:3, 1976.
7. Leake, J. L. and Martinello, B. P. A four-year evaluation of a fissure sealant in a public health setting. *J Canad Dent Ass* 8:409, 1976.
8. Horowitz, H. S., Heifetz, S. B. and Poulsen, S. Adhesive sealant clinical trial: an overview of results after four years in Kalispell, Montana. *J Prevent Dent* 3:3, 1976.
9. Handelman, S. L., Buonocore, M. G. and Schoute, P. C. Progress report on the effect of a fissure sealant on bacteria in dental caries. *J Amer Dent Ass* 87:1189, 1973.

*3M Company

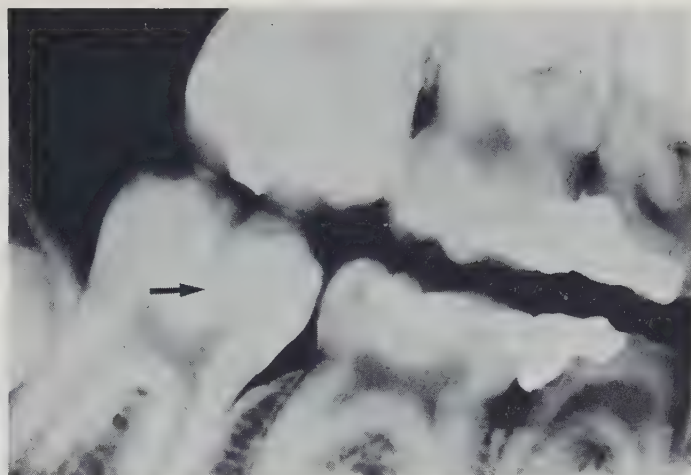
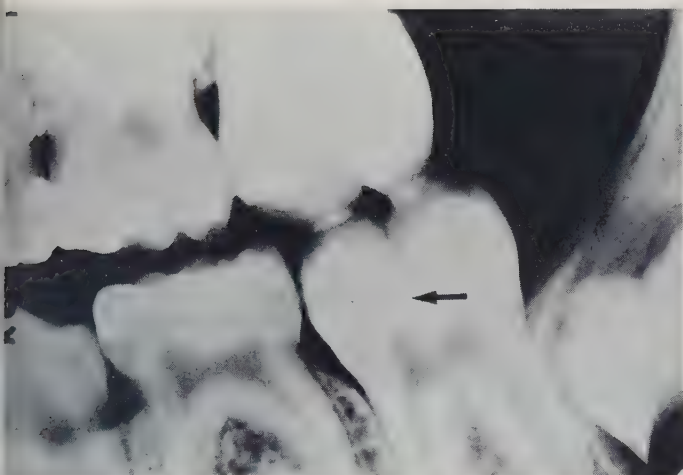


Fig 1 Occlusal caries in mandibular first permanent molars: (left) unsealed; (right) sealed.

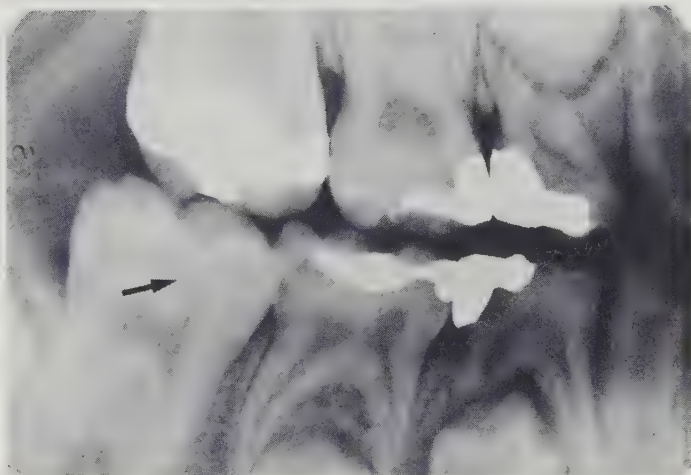
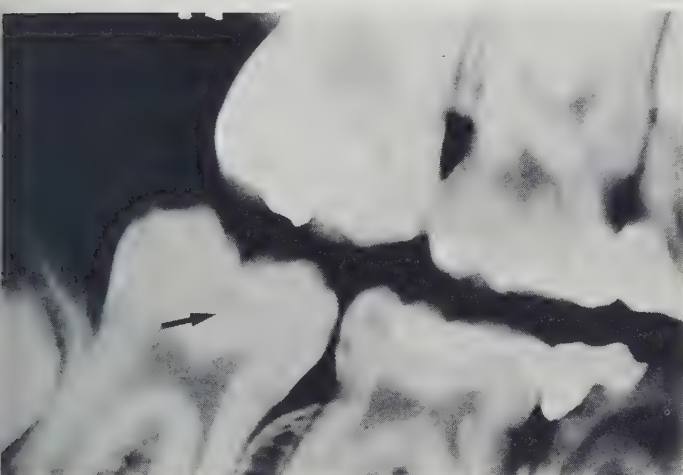


Fig 2 Occlusal caries in a sealed right mandibular first permanent molar: (left) four and (right) nine months after detection.

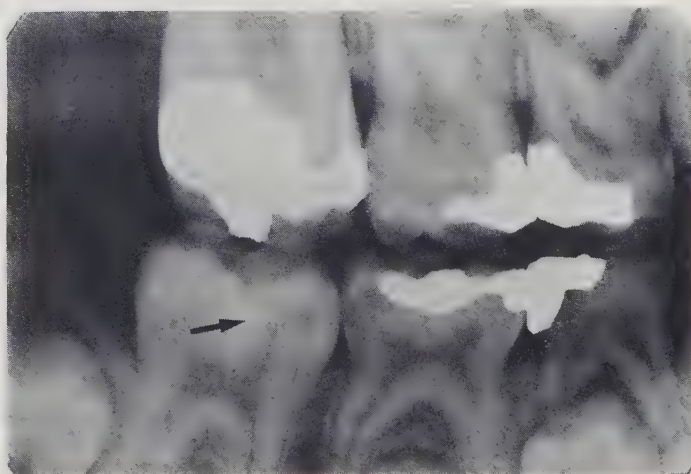
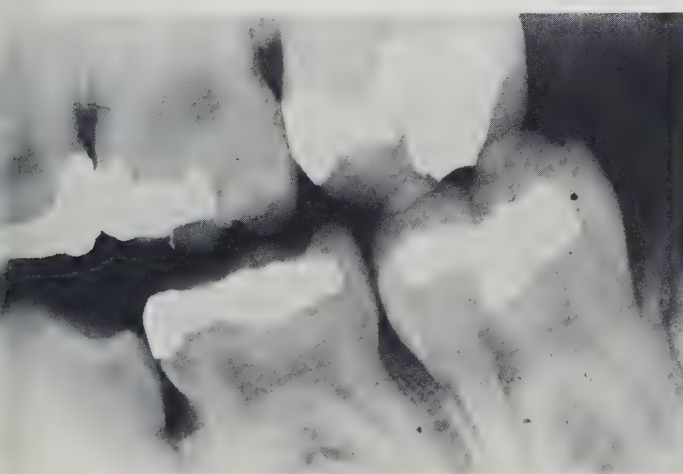


Fig 3 Occlusal restorations in mandibular first permanent molars: (left) placed at time of detection, (right) placed nine months after detection.

ora-jel-D[®]

The professional denture anesthetic, antiseptic cream saves you chair time.

During the initial new dentures break-in period, patients encounter discomfort that can mean time-consuming office visits to you. Ora-Jel D can be an invaluable aid in your practice. Ora-Jel D starts relieving pain on application. It soothes irritated tissue — without masking the problem. Provides long-lasting pain relief during the critical denture adjustment period and builds patient confidence.

For all dentures, Ora-Jel D makes adjustment easier and faster because it eases pain. Ora-Jel D works just as effectively to relieve soreness and irritation caused by orthodontic appliances.

Ora-Jel D is an easy to use cream that your denture patients can apply at home — to relieve the pain of denture irritation. It also offers anesthetic and antibacterial action. And the relief lasts for hours.

Mail coupon for free professional sample. Ora-Jel D saves time at the chair and keeps problem patients happy.

COMMERCE DRUG (CANADA) LTD.
9190 Charles de Latour St.,
Montreal 355, Canada

Dept. # J.C.D.A.

Name

Address

Zip

CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE.

Direct advertising copy to:
Marie Cosgrave, Classified Advertising Manager,
Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6,
Telephone: (613) 523-1770.

CLASSIFIED ADVERTISING RATES

(Per Insertion Per Issue):

Minimum (50 words or less)	\$15.00
Each additional word	.30
Service charge for C.D.A. Box No.	2.00

DISPLAY CLASSIFIED ADVERTISING RATES:

Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

ASSOCIATESHIP AVAILABLE

NORTHWEST TERRITORIES — Hay River. Full-time associate required in busy, well equipped practice. In addition to work in Hay River, many settlements throughout Northwest Territories are served and applicants must be prepared to travel. Write: Hay River Dental Clinic, P.O. Box 1570, Hay River, N.W.T. X0E 0R0. Phone: (403) 874-6663 (days) or (403) 874-6798 (evenings).

BRITISH COLUMBIA — Fernie. Full-time associate required with option to buy in about a year. Contact: Dr. R. H. Campbell, Box 130, Fernie, B.C.

BRITISH COLUMBIA — Fort Nelson (north-east). Associate required with view to partnership if desired. Booming town, high income, relaxed environment. Four-handed dentistry, preventive oriented. Phone: (604) 774-6444 (day) or 774-2484 (evening), or write: Dr. J. Morris, Box 958, Fort Nelson, B.C. V0C 1R0.

BRITISH COLUMBIA — Revelstoke. We are offering the opportunity for a young dentist to work with us in a non-traditional, cooperatively managed dental environment. The program is designed to help the associate learn communication skills and principles of effective practice management as well as advanced preventive and restorative techniques. Our group is located in an Alpine area and there is a great need for health improvement. Please call collect: (604) 837-5149 or write to: Evolution Management, Box 2118, Revelstoke, B.C.

BRITISH COLUMBIA — Vancouver. Oral Surgery Associate required for established Vancouver practice. Reply to CDA Box Number 1678.

BRITISH COLUMBIA — Victoria. Help! Have modern office, equipment, and patients galore. Location, downtown Victoria. Need an associate or partner, no capital outlay required. Write: P.O. Box 5217, Station "B", Victoria, B.C. V8R 6N4.

BRITISH COLUMBIA — Victoria. Young, associate dentist required. Four-chair modern operatories. Strictly medical-dental building (opposite Jubilee General Hospital). General anaesthesia privileges. Family-oriented practice. No capital outlay. Reply: Dr. B. Rauch, #310 - 1900 Richmond Ave., Victoria, B.C. V8R 4R2.

SASKATCHEWAN — Saskatoon. Full-time associate required in a busy high gross family practice. Two fully modern operatories available to associate in five-chair office. Possibility of purchase or partnership. Modern, air-conditioned Medical-Dental Building. Contact: Dr. R. E. Dickson, 621 Medical Arts Building, Saskatoon, Sask. S7K 3H3, phone: 653-3173 (home).

MANITOBA — Steinbach. Full-time associate required for group practice. Experience preferred but not essential. Modern office and equipment. Option open for full participation if compatible. All the benefits of a rural practice, but 45 minutes from downtown Winnipeg. Contact: Dr. Jim Koepke, Box 2195, Steinbach, Manitoba. Phone 326-9511 (office), 326-2003 (residence).

ONTARIO — Cambridge. An opportunity for an associateship is available in a busy centrally located high gross practice. No investment necessary and initial percentage arrangement could become future group partnership for compatible individual. The practice is situated in a newly renovated six-operator, 1800 sq. ft. office, which utilizes the open concept with Cox Systems units, Pelton and Crane Chairman chairs, Ritter X-rays and an Orthopantomograph. It is a progressive prevention oriented practice encompassing all phases of general dentistry with particular emphasis on crown and bridge and endodontics. For further information please contact: Dr. Robert Leigh, 10 George St. North, Cambridge, Ont. Phone: (519) 623-8555 (office) or (519) 632-7737 (home).

ONTARIO — Windsor Area. Associate required in young, progressive group practice. Opportunity to enter group later. New building and equipment; surplus of patients; pleasant, uncrowded office surroundings. Located in small town near Windsor, with close access to all urban and rural social and recreational facilities. Phone: (519) 776-6277 or write: Dr. D. J. Charters, Box 190, Harrow, Ont. N0R 1G0.

ONTARIO — Woodstock. Associate required for general practice in modern dental office. Share with older dentist who wishes to continue practice on a part-time basis. Three modern operatories, equipment three years old. Contact: Dr. J. D. McAskile, 379 Hunter St., Woodstock, Ont. Phone: (519) 539-9825.

NOVA SCOTIA — Urban and rural associateships available on renewable yearly contracts. Contact: Dr. A. E. MacLeod, 5880 Spring Garden Rd., Halifax, N.S. Telephone: (902) 425-7600.

OFFICES AND PRACTICES

BRITISH COLUMBIA — Burns Lake. Dentist wanted to practise in the Village of Burns Lake in northern British Columbia. Office space is available in a new Medical-Dental Building, constructed June 1976. There would be room for one or two dentists in the building. It is located directly across from the Hospital. The doctors presently in the building would be willing to provide anesthetic services for the dentists, either in the clinic or the hospital. This is an ideal opportunity for a young dentist in an expanding town, in one of the most beautiful recreational areas in British Columbia. Contact: Cotobe Management and Professional Services, PO Box 167, Burns Lake, B.C. V0J 1E0.

BRITISH COLUMBIA — Kelowna. Office space for lease in custom-built medical building situated in the rapidly growing Okanagan Valley City of Kelowna, the four seasons playground of British Columbia. For information, write to: Viewcrest Estates Ltd., 3214 Watt Road, Kelowna, B.C. V1Y 1M8.

BRITISH COLUMBIA — Lake Cowichan. The Village of Lake Cowichan, Vancouver Island, requires a dentist to establish a practice in a new building nearing completion in the main business area of the village. Area population 7,500, village population 2,500, 90% on dental plan, steady, high payroll area. For further details, write: Neiser-Erickson Development, Box 761, Lake Cowichan, B.C. V0R 2G0. Phone: 749-6145 or 749-3855.

BRITISH COLUMBIA — Terrace. For lease with option to purchase, general dental practice. Modern three-operator, preventive oriented, with good staff. Will also consider long term associate. Contact: Dr. Talarico, 4546 - 10 Park Ave., Terrace, B.C. V8G 1V4, phone: (604) 635-3031.

BRITISH COLUMBIA — Vancouver. For sale: a well established city practice. Large separate private office, reception area and waiting room, with smaller lab and dark room. Excellent asking price. Present owner returning to postgraduate studies. Please reply to CDA Box Number 1668.

ALBERTA — Calgary. For Sale. Calgary practice with high gross. Three fully equipped operatories with modern equipment. Space for fourth operator. Reply to CDA Box Number 1662.

AMOSAN OXYGEN POWER PACK.

**For pyorrhea,
trench mouth
and gingivitis.**

Amosan® delivers more oxygen to the gums, a minimum 162mg per packet. A vigorous rinse with a single premeasured packet of Amosan in just 1 oz. of water exposes all interproximal areas and gingival margins to this effective adjunctive treatment. Send for your free dentist's samples of Amosan, the whole-mouth treatment.

Amosan®

Cooper

Cooper Laboratories Limited
Boisbriand, Quebec.



ALBERTA — Calgary. To lease: three days a week, for a fixed monthly rental, fully equipped and decorated two-year-old, 1,000 sq. ft. office: two operatories, lab, large reception area, bathroom, private office, staff room, in new Medical Professional Centre close to downtown. General practice established. Phone: (403) 264-6400 between 9:00 and 5:00 p.m. or (403) 243-5416 after 6:00 p.m.

ALBERTA — Calgary. Well established general practice available. Owner retiring for health reasons. Three large operatories, two fully equipped with support rooms. X-ray and well equipped laboratory. Modern building, downtown, with reasonable rent and low general overhead. Reply to CDA Box Number 1677.

ALBERTA — Grand Centre. Dentist urgently required for a high gross, heavily booked practice in a town of approximately 3,000 population and a drawing area of an additional 15,000. Would like to sell spacious ultra-modern dental building the practice is housed in, or can be leased if desired. No other dentist presently available to serve this area. High immediate income assured in a "ready-to-move-in" practice. Call or write: Dr. J. F. Stengl, Box 809, Grand Centre, Alta., phone: (403) 594-5274.

ALBERTA — Lethbridge. Great opportunity: Move into a pleasant, established, suburban family practice in one of Canada's most pleasant growing cities — Lethbridge, Alberta. High gross, low overhead, no parking problems, spacious ground floor office, carpeted, air-conditioned. Located between the two hospitals. Associate for a time or take over now. Contact: Dr. B. Wayne Matkin, 1510 - 9th Ave. South, Lethbridge, Alta. Phone: (403) 327-3410 or 327-4922.

ALBERTA — Southern. For rent, sale, or associateship. Only dentist serving a large area. New building, equipment, and high gross income. Reply to CDA Box Number 1679.

ALBERTA — Stettler. Practice for Sale: Long established profitable dental practice in Stettler, 120 miles south of Edmonton, Alberta. A well equipped single storey building has an area of 1,400 square feet and includes five operatories, X-ray facilities, and a fully equipped laboratory all with central air-conditioning. The community of Stettler has a population of 4,500, contains a fully composite high school, excellent hospitals, a medical centre, recreational facilities including a nearby beach and other community amenities. Reply to Box 208, Stettler, Alta. T0C 2L0.

ALBERTA — Two Hills. Excellent opportunity for dentist to establish practice in modern, air-conditioned, two operator, Medical Dental Clinic. The Town of Two Hills is presently without the services of a dentist and is offering a six months rent-free premises and utilities, plus the services of a paid receptionist for the establishing period of a new dentist. Any dentist taking advantage of this generous offer would be serving a prosperous mixed farming area of approximately 6,000 people. Two Hills boasts 75 businesses and industries; modern hospital (the only one within 22 miles) and a new nursing home. Slated for construction this year is a 12 unit self-contained apartment complex for senior citizens. Extensive expansion of industry is planned over the next few years. Facilities for recreation are outstanding — baseball, hockey, curling, nine-hole golf course; wide open space, hunting and fishing at its best. For further information, contact: Mr. S. Shybunka, Chamber of Commerce, Box 148, Two Hills, Alta. Phone: 657-2571.

ONTARIO — Brampton. Dental office for rent. New Medical-Dental building conveniently located opposite the hospital. Will assist with partitioning. Phone: 451-5802 or 451-2024.

ONTARIO — Chesley. Dentist required: Chesley located in Bruce County on the North Saugeen River. An excellent opportunity in an excellent location. Population of town 1,852. Surrounding area approximately 5,000-6,000. Current school registration: 560 public school and 321 high school. New recreation complex just completed. Dental office and equipment for sale. Contact: Rex C. Luckhart, Clerk, P.O. Box 70, Chesley, Ontario. Phone: (519) 363-2524, or (519) 363-2725 evenings or weekends.

ONTARIO — Clifford. Opportunity for individual dentist in attractive, new Medical Centre at Clifford (75 miles northwest of Toronto). Equipment could be supplied if necessary. Practice would service approximately 3500 people. Good school and recreational facilities. Apply to: Clifford and Community Medical Centre Board, Box 159, Clifford, Ont. N0G 1M0.

ONTARIO — London Area. Sacrifice, health reasons. New six-year practice available immediately. Excellent opportunity for graduate or dentist seeking relocation. Phone (519) 527-1530 (collect).

ONTARIO — Mitchell. Excellent opportunity available for dentist wishing to establish a lucrative practice in a new specially designed professional building. Medical offices in the same location. For further information, write to: Mitchell Health Centre, P.O. Box 321, Mitchell, Ont., or phone: (519) 348-8512.

ONTARIO — Mississauga. Medical-Dental Building, opposite Mississauga 500-bed hospital (planned extension to 730 beds). Located in north America's fastest growing city. 250,000 present population — planned increase to 750,000 by 1990. One stop professional Medical-Dental facility with lab, X-ray and pharmacy. Recent surveys indicate need for General Practitioners in this area. Part-time space available. *Open House Saturday and Sunday:* April 23 & 24, 1:00 p.m. to 5:00 p.m. Call or write: Ken Hunt, Haney, Hunt and Bowden Ltd., 230 Lakeshore Rd. East, Mississauga, Ont. L5G 4M3, phone: (416) 274-1521.

ONTARIO — Ottawa. Family practice for sale in professional building. Consists of 900 sq. ft. comprising two fully equipped operatories (including analgesia), laboratory, hygienist room, private office, reception room. Fully air-conditioned. Phone: (613) 731-5034 after 5:00 p.m.

ONTARIO — Ottawa Area. General practice in growing town, population 4,000. Three operatories — two fully equipped, technician on premises, rent \$270. monthly. Reply to CDA Box Number 1657.

ONTARIO — Pembroke. A graduate interested in taking over my practice for the summer of 1977: May 15 — September 15 or any portion of the above. Terms to be arranged. Phone: (613) 735-6401 (home), or (613) 732-8522 (office).

ONTARIO — Toronto. General practice for sale in suburban Toronto. Established eight years. Owner returning to school. High gross with wide variety of work. Suitable for one or two dentists. Office recently completely renovated. Three fully equipped Cox operatories with room for two more. Panorex, automatic developer. Available July 1977. Contact: Blair Pollack, phone: (416) 491-7391.

QUEBEC — Montréal (Ville Mont-Royal). A vendre — Pratique établie depuis vingt ans, deux salles opératoires, les dépenses minimales, les profits appréciables. Appelez 737-6737 ou 739-6019 ou écrivez Sonolo Management, 1339 Canora Rd., Ville Mont-Royal, P.Q. H3P 2J5.

QUEBEC — Banlieu de Montréal. Bureau comprenant 2 salles opératoires toutes équipées à vendre (prix dérisoire). La clientèle remonte à plus de 75 ans de pratique. Réussite assurée au départ. (514) 773-9343 ou 772-5142.

**THE UNIVERSITY
OF ALBERTA
FACULTY OF DENTISTRY
Edmonton, Alberta**

invites the nomination of, or applications from, candidates for the position of DEAN. Both men and women are encouraged to apply. The Faculty of Dentistry is seeking an academic and administrative leader for the administration and academic work of the Faculty which consists of 50 full-time staff members and approximately 200 dentistry and 80 dental hygiene students. Written nominations or applications for the position, accompanied by a resume of qualifications and experience, should be forwarded to:

**Dr. Myer Horowitz
Vice-President (Academic)
University of Alberta
Edmonton, Alberta
T6G 2J9**



SCUTAN and IMPREGUM
belong together!

SCUTAN is the original Epimine Plastic for temporary Crowns and Bridges.

It is easily and quickly manipulated, compatible with live tooth stumps, contains no methacrylate monomer and provides immediate Crowns and Bridges of original shape and colour.

IMPREGUM is the ESPE Polyether Rubber impression material that gives, more accurate impressions, precision material for Inlays, Crowns, Bridges, Relining and Endentulous Impressions.

Flows easily and forms more rigid impressions. Deep purple colour aids observation of minute details.

BRANCHES

Halifax - St. John - Montreal - Ottawa - Toronto - Hamilton - London
Winnipeg - Regina - Edmonton - Calgary - Vancouver - Victoria

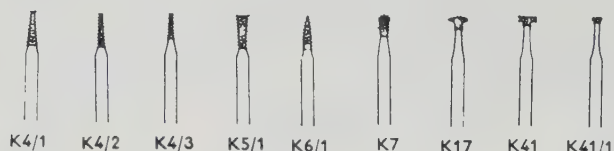
Ash Temple LIMITED

243 COLLEGE ST. TORONTO, ONT.
SERVING CANADA FOR OVER 80 YEARS

LARGE ENOUGH TO
SERVE YOU WELL . . .

**FULL SERVICE
SUPPLIER**

. . . SMALL ENOUGH TO
SERVE YOU PERSONALLY



OPPORTUNITIES AVAILABLE

BRITISH COLUMBIA — Vancouver. Community Health Centre requires full-time dentist commencing June 1, 1977. Salary negotiable. Experience preferred, but not essential. Please forward curriculum vitae to: Dr. Barbara Ann Olsen, R.E.A.C.H. Centre Association, 1145 Commercial Drive, Vancouver, B.C. V5L 3X2.

ALBERTA — Innisfail. Dentist needed to cover very busy practice for four to six weeks, May to June, 1977. Modern office, four-handed dentistry, dental hygienist; located in central Alberta (one hour drive north of Calgary). Reason: owner travelling overseas. Write: Dr. C. R. Tym, Box 339, Innisfail, Alta. T0M 1A0, or phone: (403) 227-3011, 227-5312 or 886-5544 (evenings).

SASKATCHEWAN — Public Service Commission. Director, Children's Dental Program: The Department of Northern Saskatchewan requires a Director to head a comprehensive children's Dental Health Program in Northern Saskatchewan. The program, which includes treatment prevention and education is aimed at the native population of 25,000 and incorporates a team of three dentists, six dental nurses, specially trained local dental assistants, and association with the university. The successful candidate, on occasion, will be required to travel by aircraft to communities throughout the forested lake regions from a base clinic at La Ronge, a growing community of 2,000 accessible by paved road and scheduled flights. Applicants will have university graduation from an accredited school of dentistry preferably with specialization in public health dentistry, and additional training in children's dentistry; the ability to design and organize community dental programs; social cultural sensitivity; concern with development and the capability for administrative duties. Salary \$27,912 - \$34,836 (Director of Dental Health). *Competition Number:* 613040-6-581. The salary for this position is under review, with an effective date of October 1, 1976, for any adjustment. Forward your application forms and/or resumes to: Public Service Commission, 1820 Albert St., Regina, S4P 2S8, quoting position, department, and competition number.

SASKATCHEWAN. The Department of Health, Saskatchewan Dental Plan, has several positions in various locations, available to dentists interested in the Saskatchewan Dental Plan for Children. These positions provide an opportunity for members of the dental profession to become involved in North America's first province-wide, publicly run, Dental Program for Children. A team approach is used in promoting both preventive and treatment care services to children up to 12 years of age. Saskatchewan Dental Nurses, Certified Dental Assistants and Dentists, together with supportive staff make up the teams. Basic duties include examination, diagnosis, treatment planning and supervision of dental nurse teams. Dental treatment services for children are also carried out by the supervising dentist. Incumbents must be eligible for registration with the College of Dental Surgeons of Saskatchewan, and have practice experience related to Pedodontics or Public Health. Graduates of Canadian Dental Schools and Accredited United States Dental Schools after 1948, can register in Saskatchewan without further examination. Salary \$25,584 - \$34,836 (Public Health Dental Officer). Salary commensurate with experience and qualifications. *Competition Number:* 613020-7-281. Closing date: As soon as possible. For further information, please write to the Director, Saskatchewan Dental Plan, Department of Health, 3211 Albert Street, Regina, Sask. S4S 0A6, or phone: (306) 527-1648. Forward your application forms and/or resumes to: Public Service Commission, 1820 Albert St., Regina, Sask. S4P 2S8, quoting position, department and competition number.

FACULTY OF DENTISTRY THE UNIVERSITY OF ALBERTA

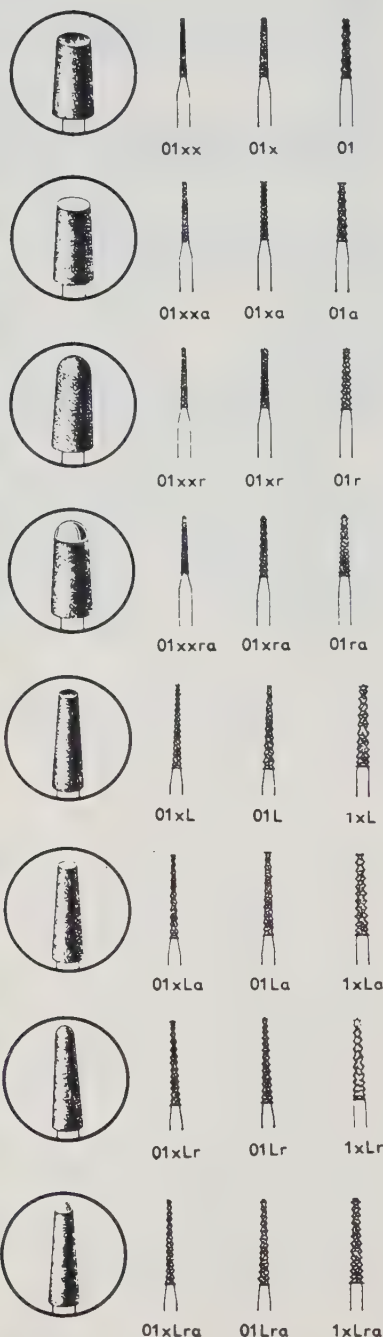
Fixed Partial Prosthodontics

Applications are invited for a full-time teaching position in the Division of Fixed Partial Prosthodontics. Candidates should have completed an accredited graduate or post-graduate certification programme and be eligible for licensure in the Province of Alberta.

Salary and rank are negotiable according to qualifications and experience. Intramural part-time practice in new facilities is available.

Applications, accompanied by curriculum vitae, should be sent to:

**Dr. W. J. Simpson, Acting Chairman,
Department of Clinical Dental Sciences,
Faculty of Dentistry, University of Alberta,
Edmonton, Alberta, Canada T6G 2N8**



**DIAMOND
INSTRUMENTS**

THESE, AND MANY MORE

Write for Catalog No. 143

PFINGST & COMPANY, INC.
62 COOPER SQ. NEW YORK, N.Y. 10003

MANITOBA — Winnipeg. Oral surgeon certified to practise in Manitoba, required for a busy Winnipeg practice. Object partnership. Please submit qualifications and curriculum vitae, and recent photo to CDA Box Number 1672.

ONTARIO — Dental Underserved Areas. The Ontario Ministry of Health offers financial support for dentists to establish practices in designated underserved dental areas. Locations are available throughout Ontario. Incentive grants, payable over four years, are \$18,000 in Northern Ontario and \$14,000 in Southern Ontario. Alternatively, a guaranteed net professional income of \$28,000 per annum is offered in Northern Ontario. A limited number of salaried positions are open on mobile dental coaches. Apply to: Dental Officer, Program for Underserved Areas, 7 Overlea Blvd., Toronto M4H 1A9. Phone: (416) 965-5036.

ONTARIO — Toronto. The University of Toronto, Faculty of Dentistry, has initiated a search for a full-time professor of clinical dentistry. The appointee will be under the general direction of the Director of Clinics. He or she will be responsible for the development of an experimental comprehensive dental care unit. In addition, the appointee must have the background in clinical dentistry and clinical research required to act as a co-ordinator for the development of learning-teaching resources and to initiate and supervise in-service programs for full- and part-time clinical staff as they relate to educational theory and methodology. Academic rank and salary commensurate with qualifications. Applicants should send a curriculum vitae to: Dr. Donald G. Woodside, Chairman, Search Committee, Faculty of Dentistry, University of Toronto, 124 Edward Street, Toronto, Ont. M5G 1G6.

QUEBEC — McGill University, Montreal. Full-time position for Periodontist, preferably with background experience or interest in Preventive Dentistry. Candidates must be eligible for licensure by Order of Dentists of Quebec, have a National Dental Examining Board Certificate and be prepared to fulfill French language requirements enabling him/her to teach clinically and enjoy consulting and private practice privileges. Temporary license would be granted in the interim. *Academic rank and duties:* Assistant Professor to participate in the undergraduate teaching of periodontics and preventive dentistry. Salary commensurate with teaching and clinical experience. Please send curriculum vitae and reference to: Dr. R. F. Harvey, Faculty of Dentistry, McGill University, 3640 University St., Montreal, P.Q. H3A 2B2.

OPPORTUNITIES WANTED

ONTARIO — Toronto/Hamilton. Good dental practice wanted immediately. Preventive oriented, 2-3 operatories preferred. Must be located either in Toronto or Hamilton or the immediate surrounding area. Willing to pay good price if conditions favourable. Please reply to: 70 Parkwood Village Drive, Apt. 406, Toronto, Ont., or phone: (416) 449-3446.

SOUTHERN ONTARIO. Dentist and Oral Surgeon: Couple desires associateships in early 1978. Dentist is 1974 University of Toronto graduate with Internship and two years' experience in general dentistry. Oral Surgeon is 1974 graduate of Ohio State University and is completing residency at Chicago hospital. Both have C.N.B. Reply to CDA Box Number 1682.

NOVA SCOTIA. Experienced dentist desires to locate in greater Halifax area. Open to offers of sale, lease or partnership. Accustomed to four-handed dentistry. Please reply to CDA Box Number 1680.

UNIVERSITY OF ALBERTA FACULTY OF DENTISTRY

PERIODONTICS

Applications are invited for a full time position in the Department of Periodontics. Applicant must be a graduate of an accredited periodontal program and should have a broad clinical and academic background with research experience.

The appointment will be at a senior level, salary according to qualifications and experience.

Opportunity is available for involvement in the development of a new periodontal curriculum.

Intramural part time practice in new facilities is available.

Please submit application and curriculum vitae to:

**Dr. P. D. Schuller, Department of Periodontics,
Faculty of Dentistry, University of Alberta,
Edmonton, Alberta, Canada T6G 2N8**

ASSOCIATESHIP WANTED

ONTARIO — Ottawa/Toronto. Dental Surgeon with university teaching affiliation, and successful solo general practice experience for six (6) years, wishes to become involved in a group practice that is preventive-oriented and growing rapidly, preferably in Ottawa or Toronto, to commence June 1977. Reply to CDA Box Number 1676.

ONTARIO. Graduate (1972) desires associateship in modern preventive dental practice. Experience in general dentistry with particular enjoyment of crown and bridge. All areas of the province considered with some preference for eastern Ontario. Available September 1977. Reply to CDA Box Number 1683.

EQUIPMENT

MANITOBA — Winnipeg. For Sale: Used equipment used only 32 weeks. One Ritter X-ray and control box; one Ritter 180 unit; one Dentsply split console unit of Mediterranean design; one Pelton chair and two matching Dentsply stools (amber tan in colour); one each of Caulk Vane-mix and Williams Silimat Amalgamator. Write or call: Dr. R. Kirouac, 1 - 130 Marion St., Winnipeg, Man. R2H 0T4.

WANTED TO PURCHASE. Used Dental Equipment: Encore control box(es), in operating condition or for parts. Midwest Quiet-Air or Tru-Line handpieces (hi-speed). Midwest Shortie slow speed handpieces; used Philips Ora-lix or Siemens X-ray machines; used Dental-Eze chairs with or without bases. Please state age, condition, serial numbers and asking price. Address replies to CDA Box Number 1681.

VACATION RENTAL

FLORIDA — Port Charlotte. Luxurious one- or two-bedroom condominiums. All conveniences: swimming pool, tennis, shuffle court. Near golf course, shopping mall, health spa. Weekly, monthly, seasonal. For further information, contact: Dr. W. Madronich, 275 Hixon Rd., Hamilton, Ont. Phone: (416) 561-9243.

HEAD OF THE DIVISION OF DENTISTRY

Applications are invited for the above part-time position. Applicants should possess appropriate post-graduate qualification and clinical experience (preferably hospital), and should hold or be eligible for licensure to practise dentistry in B.C. Previous administrative and teaching experience is desirable.

An Institute of Oncology affiliated with the University of British Columbia has been proposed.

The appointee will be responsible for the comprehensive dental care of patients, as part of an integrated head and neck cancer treatment program. A comprehensive dental team will be developed.

Further duties will ultimately include the supervision of undergraduate dental students.

Remuneration will be negotiable according to qualifications and experience.

Applications with curriculum vitae and three referees should be forwarded, no later than May 31, 1977, to:

**Dr. D. A. Boyes, Director
Cancer Control Agency of B.C.
2656 Heather Street
Vancouver, B.C. Canada
V5Z 3J3**

REGIONAL MUNICIPALITY OF WATERLOO

requires

DENTAL HYGIENISTS

for the Regional Health Unit

The Region of Waterloo is an ideal area in which to live and work. These openings offer excellent opportunities for hygienists to perform community educational and preventive pre-school and school dental programs.

Duties involve teaching to a variety of groups on dental hygiene and providing necessary follow-up services in community relations and dental health education. Also to conduct topical fluoride applications, prophylaxis, clinical inspections and to compile statistical data.

Applicants must be graduates of an accredited program of hygiene and be eligible for licence in Ontario.

Salary is negotiable within the current salary range depending on experience. Excellent fringe benefits, vacation and car allowance.

Please reply in writing to:

Mr. R. Dick,
Personnel Officer,
Regional Municipality of Waterloo,
8th Floor, Marsland Centre,
20 Erb St., W.,
Waterloo, Ontario N2J 4G7

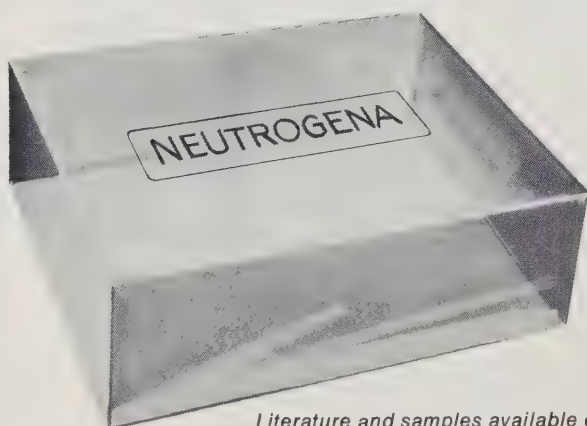
ADVERTISERS' INDEX

Ash Temple Ltd.	193
Astra Pharmaceuticals (Canada) Ltd.	IBC
C. E. Attenborough	198
Block Drug Co. of Canada	143
Canada Permanent Trust	197
The L. D. Caulk Co. of Canada	183, 184
Colgate Palmolive Ltd.	153
Commerce Drug	190
Cooper Laboratories	145, 192
Denco	151
Dentsply International	140, 148, 149, 167
Eaton Laboratories	IFC
Charles E. Frosst	171
Medifacts	173
C. V. Mosby	187
Nobilium Products of Canada	175
Novocol	177
Pelton and Crane	OBC
Pfingst and Co. Inc.	194
Procter and Gamble	139
Professional Pharmaceutical Corp.	196
Siemens Electric	178
Whaledent International	168

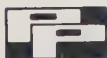
Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.

If you wash your hands
50 times a day
(as most dentists do)

You need Neutrogena



Literature and samples available on request



PROFESSIONAL PHARMACEUTICAL CORP.
2795 BATES ROAD, MONTREAL 251, QUEBEC • (514) 739-3633



"It's the night watchman at the clinic. Says he forgot his glasses and can't read the directions on your fire extinguisher."

As a dentist, aren't you busy enough doing what you do best?

At the Permanent, we know how busy you are. And we know that you probably don't have adequate time to spend on something as important as your own financial planning. That's where we can help. Because we've got the time and the expertise to take care of all your personal financial matters.

It's our chosen profession.

We can help you defer taxes, plan your estate to reduce taxes, manage your investment portfolio, help you buy or sell real estate, arrange a first or second mortgage, act as your executor and trustee, build a worthwhile retirement savings plan.

With all these services and over 120 years of experience behind us, we don't think you need look much further for Professional help in your financial planning.

Yes, I am busy... Please tell me how I can take advantage of your time and expertise to help me with my personal financial matters.

I am interested in how to:

- ☐ defer taxes ☐ plan my estate
- ☐ manage my investments
- ☐ buy or sell real estate
- ☐ arrange a first or second mortgage
- ☐ build a worth while retirement savings plan.

Mail this coupon to Mr. F. R. Cooper, The Permanent, 20 Eglinton Ave. W., Toronto, Ontario M4R 2E2.

If you'd like the information faster, call him collect at (416) 484-2208.

Name _____

Address _____

City _____ Prov. _____

Telephone _____ Postal Code _____



the Permanent

Canada Permanent Trust Company.
Canada Permanent Mortgage Corporation

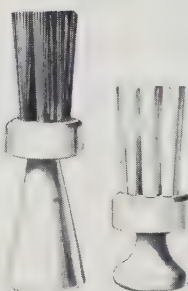
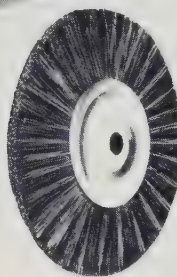
Professionals helping professionals.

Attenboroughs dental brushes

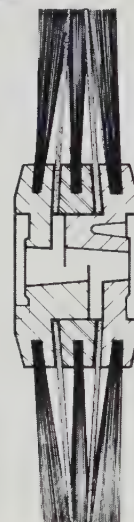


METAL CENTRE BRUSHES

47 mm. Diameter
Soft or stiff black,
soft white or grey
white, chamois or
calibris types all with
a stainless steel
centre for all fine
metal and crown and
bridge work.



**LONG AND SHORT
FINGER PALATE
BRUSHES** with moulded plastic
unbreakable stocks
9 knots of extra stiff bristle or soft
grey white hair in a tough plastic
stock will reach into even the
deepest palate.



THE NEW CALIBRIS BRUSH

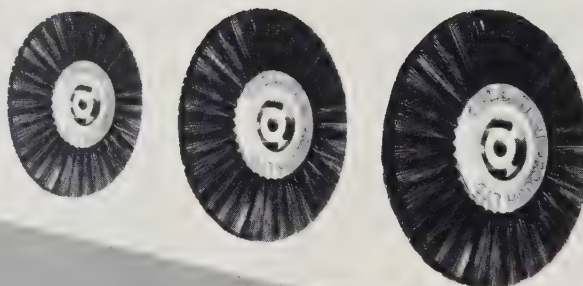
80 mm. Diameter
3 rows of bristle
interleaved with 2
rows of calico and
incorporating a 3 part
injection moulded
stock. Thus the calico
can be bonded into
the stock giving full
wear and service.

Pat. No. 883928
Canada 1971



CUP AND WHEEL BRUSHES

Tooth polishing brushes in a variety
of sizes: Junior, small and large
cup. Small and large wheel.
Available in either bristle or nylon
with straight or right angle
handpiece.



MOULDED PLASTIC CENTRE 2, 3 and 4 ROW BRUSHES

65 mm. 72 mm. 82 mm.
Diameter
Tough and durable plastic centres
and the finest bristle or hair
combine to make brushes of a
superior quality in three different
sizes.



G & L E Attenborough Ltd.

DENTAL MECHANICS & DENTAL BRUSH MANUFACTURERS
VISCOSA HOUSE, GEORGE STREET, NOTTINGHAM NG1 3BN. ENGLAND
TELEGRAMS: LATERAL NOTTINGHAM. TELEPHONE NOTTINGHAM 43562-3

REGISTRATION FORM

77TH ANNUAL WORLD DENTAL CONGRESS FEDERATION DENTAIRE INTERNATIONALE



TORONTO CANADA

22-28
OCTOBER
1977

For advance registration return one copy with appropriate fees before
September 14, 1977; otherwise register at Congress.

Return to: 1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario, M5W 1X3
CANADA.

PLEASE TYPE OR USE BLOCK LETTERS; WHERE APPLICABLE CIRCLE APPROPRIATE RESPONSE

SURNAME: _____ INITIALS: _____ Prof./Dr./Mr./Mrs./Miss _____

ADDRESS: _____

COUNTRY: _____ Language for documents: English / French / German / Spanish

FDI MEMBERSHIP:

Are you a supporting member of the FDI YES/NO

MEMBERSHIP REGISTRATIONS

F.D.I. Supporting Member — \$100 before or \$120 after July 1 _____ \$ _____

Canadian Dental Association (Non FDI) Member \$115 before or \$130 after July 1 _____ \$ _____

ADDITIONAL REGISTRATIONS (\$10 each; no fee for spouse or other family member)

REGISTRANT: _____ SURNAME: _____ INITIALS: _____

Spouse: _____ \$ _____

Family member: _____ \$ _____

Auxiliary: _____ \$ _____

Student: _____ \$ _____

MILITARY PERSONNEL ONLY

Rank: _____

Attending Military Conference and Field Visit to Base Borden — on Thurs., October 20 YES/NO accompanied YES/NO

SOCIAL PROGRAM

Congress Ball — Tues., October 25. (\$30. per person; limited attendance) _____ \$ _____

Canadian Hoedown — Fun Night — Wed., October 26. (\$15. per person) _____ \$ _____

ADIES PROGRAM

Fashion Show and Luncheon — Mon., October 24. (\$12.50 per person) _____ \$ _____

Sightseeing Tours — English Commentary

Toronto City — mornings — specify day. Mon./Tues./Wed./Thurs. _____ \$ _____

(\$6 per person) _____

Toronto City and Harbour (bus and boat) — mornings — specify day. Mon./Tues./Wed./Thurs. _____ \$ _____

(\$7 per person) _____

Niagara Falls — all day — specify day Mon./Tues./Wed./Thurs. _____ \$ _____

(\$22 per person including lunch) _____

McMichael Canadian Art Gallery — 5 hours. Tues., October 25 _____ \$ _____

(\$12 per person including lunch) _____

Antique — all day Thurs., October 27 _____ \$ _____

(\$19 per person including lunch) _____

TOTAL FEES (CANADIAN \$ ONLY) _____ \$ _____

MAKE CHEQUES OR MONEY ORDERS PAYABLE TO FDI/CDA WORLD DENTAL CONGRESS

CANCELLATION CLAUSE

Ten per cent will be deducted from registration fees of registrants cancelling up to two months before the Congress and 20 per cent from those cancelling up to one month before the meeting. Money paid for social events by those not attending the meeting will be repaid in full. Money will not be refunded for tickets which cannot be resold during the Congress.

PRE AND POST CONGRESS TOURS

If you are interested in detailed information concerning Pre and Post Convention tours, please check here ☐

SIGNATURE _____ DATE _____

**65 TH ANNUAL
WORLD DENTAL CONGRESS
FEDERATION
DENTAIRE INTERNATIONALE**



**TORONTO
CANADA**

22-28
OCTO
1977

One copy to be returned with appropriate fees and the registration form before September 14, 1977 to:—

1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario M5W 1X3
Canada

For room reservations, please print or type three choices

1st _____

2nd _____

3rd _____

Please enter my reservations at the above hotel for:

Singles	Twin/ Doubles	1 Bdrm.	Suites 2 Bdrm.
☐ @ \$ _____	☐ @ \$ _____	☐ @ \$ _____	☐ @ \$ _____

If rate requested is not available, the next highest will be assigned.

*Please DO NOT send your request directly to the HOTEL;
it WILL ONLY DELAY your confirmation. Please allow
two — three weeks to receive confirmation.*

Room will be occupied by: (please print or type)

Name _____

Street _____

City _____ State _____ Zip _____

Additional Occupants _____

Date Arriving _____ AM
PM _____ Departing

THE DEADLINE FOR MAKING ADVANCE RESERVATIONS IS SEPTEMBER 14, 1977.

Hotel	Single	Double/Twin	1-Bed Suite	2-Bed Suite
1. Royal York (Hdqts.)	\$35	\$45	\$70 - \$135 (Studio suites \$60 - \$70)	
2. Sheraton Centre	\$33 \$38 \$43 (Cabanas \$59)	\$40 \$47 \$52	\$85 to \$153 (Hosp. Suites \$163 to \$203)	\$128 to \$196
3. Harbour Castle Hilton	\$35	\$42	\$70 - \$95	\$137
4. King Edward	\$20	\$24 \$26	\$38	\$70
5. Lord Simcoe	\$20	\$25		
6. Hotel Toronto	\$35	\$45	\$92 \$102 Add \$10 for double occupancy	\$132 \$152
7. Holiday Inn Toronto Downtown	\$30	\$39 \$42		
8. Bond Place	\$20	\$24		
9. Chelsea Inn	\$25	\$29		
10. Carlton Inn	\$17	\$21		
11. The Westbury	\$29.50	\$36.50		
12. Sutton Place	\$36.50	\$44.50		
13. Town Inn	\$29	\$34		
14. Park Plaza	\$34	\$38		
15. Hyatt Regency	\$38	\$45		
16. Hotel Plaza II	\$28	\$35		
17. Inn On The Park	\$38	\$46		
18. Prince	\$34	\$40		
19. Holiday Inn Don Valley	\$32	\$42		
20. Ramada Inn - Toronto	\$29.50	\$36.50		
21. Bristol Place	\$33.50	\$35.50		
22. Cara Inn	\$28	\$35		
23. Constellation	\$34	\$42		
24. Skyline	\$30	\$36		
25. Toronto Airport Hilton	\$29 - \$37	\$37 - \$45		

(Suites upon request \$75 - \$250)

Each of the above rates is quoted in Canadian Currency. Ontario sales tax — 7% not included.

WE STRONGLY URGE THAT YOU MAKE YOUR HOUSING RESERVATIONS EARLY, PARTICULARLY IF YOU PLAN TO ARRIVE ON SATURDAY. STATISTICS FROM THE TORONTO TOURIST INDUSTRY INDICATE A HEAVY INFLUX ON OCTOBER WEEKENDS.

(Please make all changes and cancellations in writing directly to the Organizing Committee).

Note: FDI business meetings and a portion of the scientific program will take place at the Royal York Hotel. The Dental Trade Show and other portions of the scientific program will take place at the Automotive Building, Exhibit Place.



If you think waiting for anesthesia onset is hard on you, think what it's like for him.

The more you had to ask "Feel anything?" the more convinced your patient got that he was going to.

So another piece of dentistry got off to a tense start.

For both of you.

And that's why Astra Canada developed Citanest Forte for routine

ASTRA

Mississauga, Ontario

dentistry. It's fast. It's effective. Yet doesn't take all morning to wear off.

Citanest Forte from Astra. In the handy Kleen Pak.

It's making dentistry a whole lot easier for patients.

And a whole lot easier for you.



Citanest[®] FORTE



JUST WHAT THE DOCTORS ORDER.

THE LIGHT FANTASTIC.

Light years ahead of the rest. Compact, yet complete, offering three intensities of multi-positional light from a highly advanced source that continues to outlast conventional lamps. This, plus a variety of available mounts — track, ceiling-column, unit or wall — make the Light Fantastic, the most



flexible and by far the most extraordinary light in the field.

The Light Fantastic, from Pelton & Crane, for the ultimate operator.

At your full service supplier or write



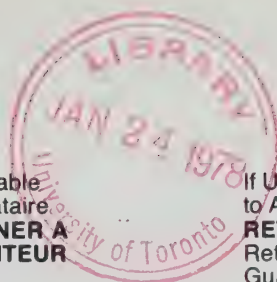
Pelton & Crane
P.O. BOX 3664 CHARLOTTE, NC 28203



OUR 75TH ANNIVERSARY

DENTAL JOURNAL DENTAIRE

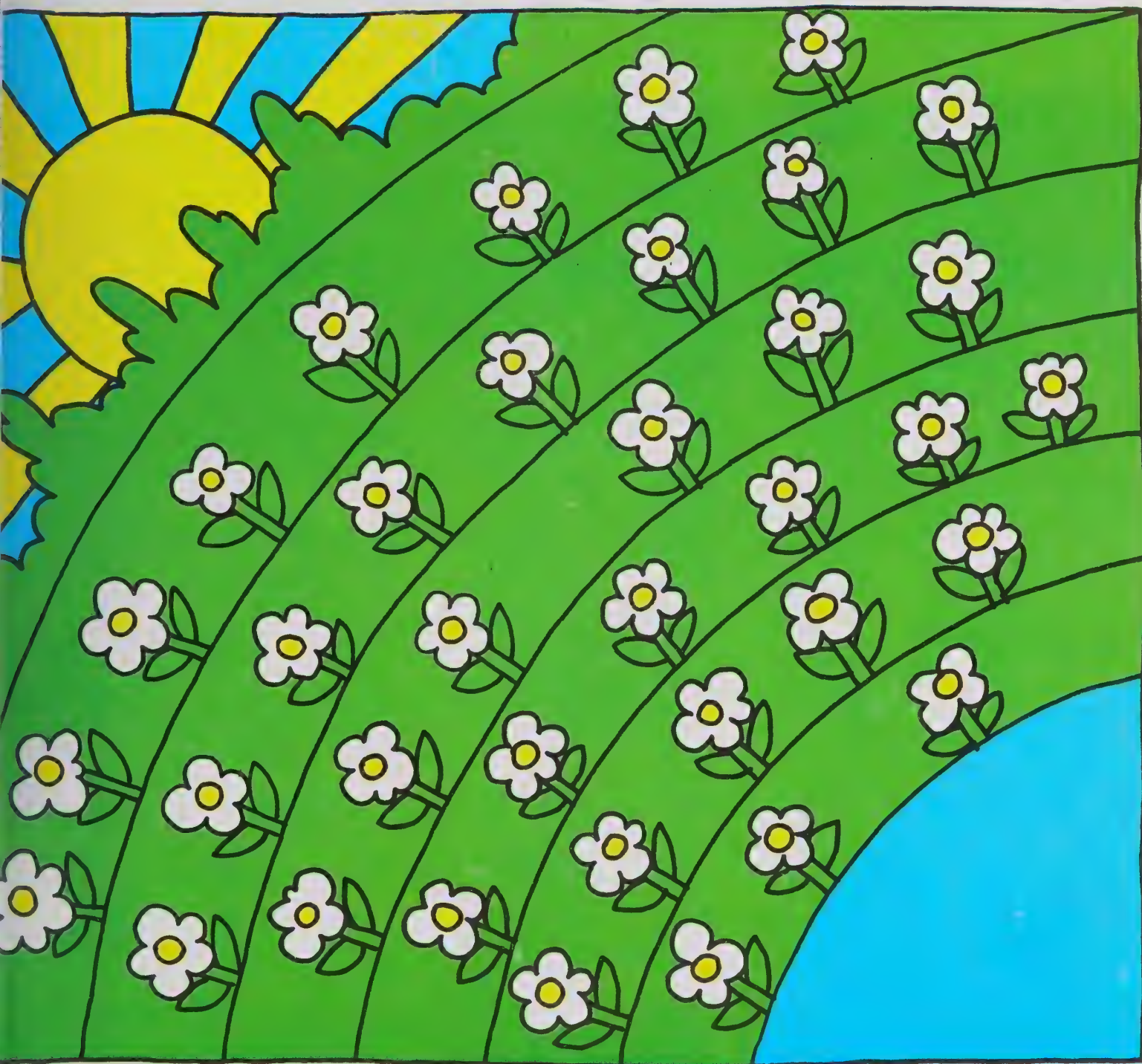
Si non livrable
au destinataire
**RETOURNER A
L'EXPEDITEUR**
Port payé



If Undeliverable
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed.

May/Mai 1977/Volume 43/No 5

Canadian Dental Association/Association Dentaire Canadienne



In this issue:
Canadian Dental Aptitude Test.
Is Dry Socket Preventable?

Pulpal Response to Cavity Treatment
with Microbicidal Solution and
Silicate Restorations in Monkeys

The Extraoral Film Story

in Panoramic Black and White.

Extraoral radiography used in conjunction with intraoral radiography tells the whole story.

After you've made periapical, or interproximal, or occlusal X-ray studies of your patient, you may find that in addition, you need a broader scope of information for your diagnosis.

You get it with extraoral radiography—in examinations of the mandible and the maxilla that call for a panoramic view of the oral structures on a single radiograph.

Kodak films for both extraoral and intraoral radiography give you high quality informative radiographs. And with proper processing, you'll need only a minimum of exposure.

For more information about our panoramic dental X-ray film, write:

Radiography Markets, Kodak Canada Ltd.,
3500 Eglinton Avenue West, Toronto, Ontario
M6M 1V3; or call a Kodak representative to
arrange an appointment.



a commitment
to quality



Prevention between visits



Brushing and flossing. Good diet. And CREST.

The at-home contribution to preventive dentistry between professional visits.

CREST has the actual research and recognition of effectiveness.

In fact, CREST has more extensive research than any other fluoride dentifrice, and the only clinical research to prove *added* anticaries protection... over and above the protection provided by office-applied fluorides. Give your patients MORE protection... recommend clinically proven, clinically tested CREST.



"Crest has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."— Canadian Dental Association.



Leadership in research=Confidence in Crest

©1976 PROCTER & GAMBLE, TORONTO CAS-381

20

In the natural beauty of a daisy there is a simple logic: a harmony of form, size, color and arrangement.

The Trubyte® System uses the same logic to provide the point of departure for a beautiful denture.



Trubyte® Bioblend® Anteriors...expression
a simple, natural logic.

TRUBYTE®

D Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1977 Dentsply International, Inc.
All rights reserved.

JOURNAL

of the Canadian Dental Association
de l'Association Dentaire Canadienne
May/Mai 1977/Volume 43/No 5

PUBLISHER/Canadian Dental Association
SCIENTIFIC EDITOR/R. S. Turnbull, DDS
EDITOR/Diane Charter
FRENCH SCIENTIFIC EDITOR/Robert Lambert, DDS

MANAGING EDITOR/ADVERTISING/Anna Spencer
EDITORIAL SECRETARY/Mary Maxwell
CLASSIFIED ADVERTISING/Marie Cosgrave
CIRCULATION/Cathy Cronin

ISSN 0382-8514

Regular Features

Announcements	204
Letters to the editor	208
Dentistry in the news	210
Deaths	214
ADI/CDA Congress News	219
Des actualités dentaires	220

Articles

The Canadian Dental Aptitude Test — Teteruck	225
Is dry socket preventable? — Rozanis, Schofield and Warren	233
Pulpal response to cavity treatment with antimicrobial solution and silicate restorations in monkeys — Beagrie and Brännström	239

Classified advertising	244
------------------------	-----

Advertisers' index	248
--------------------	-----

Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1977 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454.

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association.

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1977 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22).

Veuillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences. Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise.

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Announcements/Avis

Canadian Dental Association 1977, Toronto, Oct. 22-28.

Fédération Dentaire Internationale 65th Annual World Dental Congress 1977, Toronto, Oct. 22-28. FDI/CDA Congress Office: P.O. Box 6423, Terminal A, Toronto, Ontario M5W 1X3.

Canadian Meetings:

Third International Congress on Cleft Palate and Related Craniofacial Anomalies, at Royal York Hotel, Toronto, June 5-10, 1977. Congress Secretariat, 191 College St., Toronto, Ont. M5T 1P7.

The Association of Canadian Faculties of Dentistry/ L'Association des Facultés Dentaires du Canada, Annual Meeting and Annual Teaching Conference, Faculty of Dentistry, Laval University, Quebec City, June 12-16, 1977. Dr. G. W. Myers, 5069 Dentistry/ Pharmacy Centre, University of Alberta, Edmonton, Alberta T6G 2H7.

Western Canada Dental Society, at Banff Springs Hotel, Banff, Alberta, July 3-6, 1977. Dr. D. Pedlar, Publicity Chairman, Western Canada Dental Society, 1711-4th St. S.W., Ste. 303, Calgary, Alberta T2S 1V8.

Canadian Academy of Restorative Dentistry, Park Plaza Hotel, Toronto, October 21-22, 1977, just prior to the FDI World Dental Congress. Dr. D. B. McAdam, Associate Professor, Department of Restorative Dentistry, University of Toronto, 124 Edward St., Toronto, M5G 1G6.

Canadian Dental Hygienists Association, Annual Meeting, Bond Hotel, Toronto, October 23-27, 1977, in conjunction with FDI World Dental Congress.

Canadian Dental Nurses and Assistants Association, Annual Meeting, Holiday Inn, Civic Square, Toronto, October 23-27, 1977, in conjunction with FDI World Dental Congress.

Canadian Society of Oral Surgeons, Annual Convention, Hyatt Regency Hotel, Toronto, October 28-31, 1977. Contact: Dr. W. Prusin, Convention Chairman, 919 Ellesmere Rd., Scarborough, Ont. M1P 2W7.

Les Journées Dentaires du Québec, at the Quebec Hilton Hotel, Quebec City, May 28-31, 1978. Dr. R. M. Lang, 5171 Decarie Blvd., Montreal, Que. H3W 3C2.

Pacific Dental Federation Convention, July 23-26, 1978, Vancouver. Contact: Dr. Ken Neuman, President, Pacific Dental Federation, 1125 West 8th Avenue, Vancouver, B.C. V6H 3N4.

International Meetings

American Academy of Pedodontics, at Bal Harbour, Florida, May 29-June 1, 1977. Merle C. Hunter, 211 East Chicago Ave., Suite 1235, Chicago, Illinois 60611.

Pain Control in Dentistry, World Congress, Mauritius Island, June 7-9, 1977. Contact: Dr. Paul Virapin, Executive Secretary, 15, avenue de Maurin, 34000—Montpellier, France.

American Dental Association, 28th Annual Management Conference, at ADA Headquarters, Chicago, June 13-15, 1977. American Dental Association, 211 East Chicago Ave., Chicago, Ill., 60611, USA.

Northeast Regional Oral Surgery Meeting, Lake Placid, New York,

June 24-26, 1977. Topic: Pain and pain control. Dr. Thomas Lanka, 1325 Union St., Schenectady, New York 12308.

Academy of General Dentistry, Annual Meeting, at Queen Elizabeth Hotel, Montreal, Quebec, June 25-29, 1977. Contact: Academy of General Dentistry, 211 East Chicago Ave., Chicago, Illinois, 60611, USA.

British Dental Association, Annual Conference, Aberdeen, June 30-July 3, 1977.

Third International Odontological Congress of the Brazilian Dental Association and First National and International Congress of the Odontological Services of the Armed Forces, Federal University of Rio de Janeiro, Brazil, July 15-21, 1977. Contact: Associacao Brasileira de Odontologia, Avenida 13 de Maio, 13-10 andar, conjuntos, 1001/2-5/116, Rio de Janeiro, R.J., Brazil.

International Association of Oral Myology, Fifth Annual Convention, Lodge of the Four Seasons, Lake Ozark, Missouri, June 18-21, 1977. Contact: Dr. John Howland, 457 Coventry Green, Suite 120, Crystal Lake, Illinois 60014.

American Dental Society of Europe, Island of Rhodes, June 27-July 2, 1977. Dr. James Molony, Secretary, 110 Harley St., London, W.I., England.

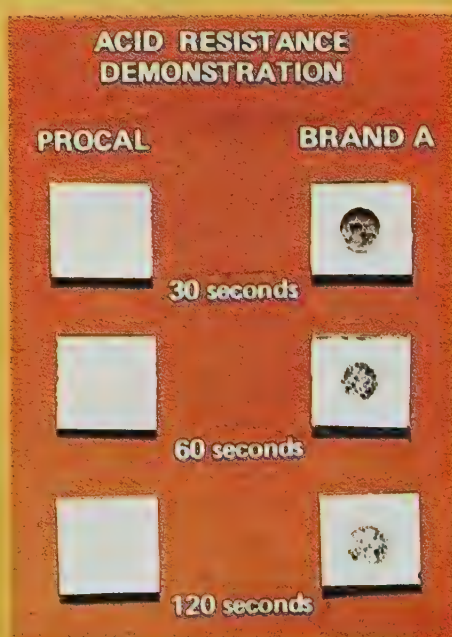
Swedish Dental Hygienists' Association, Sixth International Symposium on Dental Hygiene, at Stockholm, Sweden, June 30-July 2, 1977. Symposium theme: Plaque control. Working language: English. Eve Runsten, Secretary General, Sixth Inter-



A good filling begins with a great base.

Introducing 3M's 'PROCAL' Protective Calcium Hydroxide Base.

"PROCAL" Base is an effective hard-setting base for moderate to deep cavities. In laboratory tests, "PROCAL" was compared to three other base compounds in demonstrations of pulp protection from acid etchants. "PROCAL" Base was applied to 3 slides and placed in a humidity chamber for various periods of time. The same procedure was followed with a leading competitive brand. A 37% orthophosphoric acid etchant was applied for one minute then rinsed away. The results were conclusive. "PROCAL" proved to be the most effective pulp protector. Test results available upon request. "PROCAL" also provides insulation against thermal changes, assists in the formation of secondary dentin, offers high compressive strength, offers



low volume shrinkage, is radiopaque, has excellent colour, and its components do not inhibit polymerization or effect colour stability of resins and composites.

"PROCAL" Base works exceptionally well with "CONCISE" Composite and "CONCISE" Composite and Enamel Bond System. Order "PROCAL" today! Because a good filling begins with a great base! For further information, contact your local 3M Dental Products Distributor.

3M

Where ideas come to life.

national Symposium on Dental Hygiene, c/o RESO Congress Service, S-105 24 Stockholm.

Hungarian Dental Association, Twelfth Congress, at Pécs, Hungary, August 25-27, 1977. Contact: Professor I. Szabo, 7621 Pécs, Dischka Gyozo u.5 Hungary.

International Epidemiological Association, Eighth International Scientific Meeting, at Las Croabas, Puerto Rico, Sept. 18-23, 1977. Dr. Carlo Luis Gonzalez, Program Secretary, Universidad de Los Andes, Facultad de Medicina, Centro de Estudios de Post-Grado, Merida-Venezuela.

International Association for Orthodontics, Annual Meeting, Bayshore Inn, Vancouver, B.C., September 21-25, 1977.

Dental Association of South Africa, Fifth International Scientific Congress, Stellenbosch, Republic of South Africa, Sept. 26-30, 1977. Contact: Dr. L. S. Maresky, Congress Secretary, P.O. Box 96, 7503 Parowvallei, C.P., South Africa.

American Dental Association, 118th Annual Session, at Miami Beach Convention Centre, Florida, October 9-13, 1977. Contact: American Dental Association, 211 East Chicago Ave., Chicago, Illinois, 60611, USA.

Society for Clinical and Experimental Hypnosis, 29th Annual Workshops and Scientific Program, Hyatt House Hotel, Los Angeles, October 11-16, 1977. Mrs. Marion Kenn, Administrative Director, SCEH, 129A Kings Park Drive, Liverpool, New York 13088.

Winter Medical-Dental Assembly, Nairobi, Kenya, East Africa, October 28-November 18, 1977.

Eighth Paulista Convention of Odontology and the 10th Latin American Seminar of Odontology, Sao Paulo, Brazil, January 21-28, 1977. Dr. Edmir Matson, General Secretary, Rua Humaitá 389, Caixa Postal 2523, CEP 01321, Sao Paulo, Brazil.

Australian Dental Association, Jubilee Congress, Melbourne, February 12-16, 1978. Contact: Dr. D. Behrend, Honorary Secretary, 1978 Jubilee Dental Congress, P.O. Box 29, Parkville, Victoria 3052, Australia.

Circulo Odontologico Del Sur (Southern Argentina Dental Society), Second International Congress and Third Socio-Economic Congress, Bahia Blanca, Argentina, May 25-28, 1978. International lecturers will deal with all clinical specialties. Contact: Dr. R. L. Ellis, Associate Professor, Department of Community Dentistry, University of Toronto, Faculty of Dentistry, 124 Edward St., Toronto.

Price Ripoff?

Good news for dentists who complain about the excessive prices of dental supplies! Denco knows of a way to lower them.

All we need do is reduce the quality and extent of our product-line to the barest minimum. Then eliminate our Personal Sales Representation; Quick Delivery; Repair Services; Charge Accounts; Returns and Credit Policies; Support for Dental Undergraduates; Instruction for Auxiliaries; and our involvement with the dental community. We'd be heroes. Right?

Not true. The majority of our customers firmly believe that the services of a full-line supplier, like Denco, are essential to the effective and efficient operation of a professional dental practice... and would feel "ripped-off" without them.

Believe us, Doctor.
The price is right!

DENCO



new Aim[®] toothpaste

The fluoride toothpaste with the taste children prefer



Child-tested and proven for its superior taste

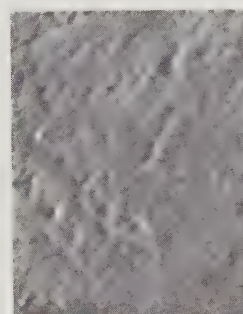
1300 children tested the taste of new Aim Toothpaste against the taste of the two leading fluoride brands. Result: Children preferred Aim 2 to 1 over those brands. They find its minty flavour truly delicious and they love its clear blue-green color and smooth texture. Significance: With taste so superior, your young patients will hardly need coaxing about brushing. And by brushing regularly, they'll get the anti-cavity ingredient they need — regularly.

Proven for its fluoride ion availability

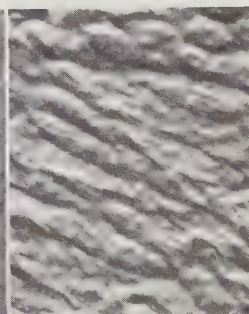
New Aim contains the established concentration of 0.4% stannous fluoride — an anti-cavity ingredient time-proven for its effectiveness as an aid in reducing the incidence of cavities. Aim also has a silica gel base, assuring that the fluoride ion availability is maintained during normal shelf life. In fact, laboratory tests show that the fluoride concentration in Aim is readily available for incorporation into tooth structure.

Proven for its gentleness to dentin and enamel

Aim's silica aerogel/xerogel abrasive system* aids in the removal of plaque, pellicle, food particles and stains — with notable gentleness to enamel and dentin. Significance: Aim means patients' teeth safely — the way you want them to be.



Surface of normal tooth enamel (2000x) — treated with Aim (exposed section of polished enamel surface, immersed for 15 minutes in a 25% aqueous slurry of Aim followed by a thorough rinsing) — then etched with 0.1N lactic acid, pH 4.5 for 10 minutes. Enamel surface shows minimal etching.



Surface of normal tooth enamel (2000x) — sectioned and polished but left untreated — etched with 0.1N lactic acid, pH 4.5 for 10 minutes. Enamel surface shows extensive etching.

RECOMMEND AIM WITH CONFIDENCE...



a product of:
LEVER DETERGENTS LIMITED
Toronto, Ontario M4M 1B6

*Canadian Patents #835353; #914069

Post-graduate training and graduate education in dentistry

I would like to comment on Dr. J. H. P. Main's criticism (J. Canad. Dent. Assn., Feb. 1977) of the article written by Dr. A. H. Melcher on post-graduate training and graduate education in Dentistry (J. Canad. Dent. Assn., Dec. 1976). The major point of contention is the suggestion by Dr. Melcher that the programme for training dental specialists is too short to produce individuals who are both well-trained clinically and also highly educated. In this case "highly educated" refers to the academic component in the programme. I agree in principle with Dr. Main, and also with Dr. Sperber who reviewed the article, that it would indeed be most unfortunate if this aspect of the specialists' training were reduced, particularly as historically the teaching of professional courses was brought into the University for this purpose. However, as a person who is more likely to be subjected to the clinicians' instruments rather than manipulating them myself I feel that, given the time restriction, the clinical training must take precedence.

Increasing the training time to accommodate an adequate academic component, I am sure, would be undesirable to all concerned. In addition, it is sad to say that the majority of dentistry students in the specialty programmes have limited interest in the academic side of their profession and, as Dr. Sperber has pointed out, they are difficult to stimulate in this direction.

As a scientist, I am particularly concerned by Dr. Main's attempt to draw an analogy between the basic sciences Ph.D. and the professional degrees. There is no evidence to suggest that the academic content of a D.D.S. or an M.D. course prepares a student for research more adequately than does that of a B.Sc. In fact, none

of these courses really provide any research training at all. Consequently, B.Sc., D.D.S. and M.D. graduates are unlikely to be capable of carrying out research unless they are under the close supervision of a fully qualified research worker (Ph.D. or equivalent). A Ph.D. requires approximately 4½ years post-graduate training at University before he is considered capable of independent research, and more often than not a further period of post-doctoral work is considered necessary. Of course there are exceptions. Some individuals without Ph.D.s, or training equivalent to a Ph.D., have become recognized research workers, but these people are extremely rare. To suggest that any D.D.S. or M.D. is capable of carrying out competent research without having adequate exposure to research method is incomprehensible and, if one were to reverse the situation, is equivalent to suggesting that a basic science Ph.D. is capable of setting-up and operating a clinical practice. I hope that these points will not be quietly forgotten, as Dr. Main suggests they should.

*Jaro Sodek, PhD,
Medical Research Council Group
in Periodontal Physiology,
University of Toronto.*

Winnipeg Free Press Editorial

In the January, 1977 issue of the Journal of the Canadian Dental Association, an editorial was reprinted from the Winnipeg Free Press criticizing the Manitoba Government for its decision to implement a children's dental program.

It is reasonable that dentists across Canada would be interested in opinions on the implementation of such a program, but surely in a professional dental journal, such an editorial should

be written by an informed dentist in Manitoba. If an article must be borrowed from a newspaper article, is it too much to expect the statements to be verified before publication?

Dentists who deal with the newspapers on an occasional basis are frequently frustrated by journalists whose reporting is often inaccurate and distorted. This editorial is a typical example in which misleading and inaccurate figures are quoted in an attempt to strengthen an argument. Surely readers of the Journal of the Canadian Dental Association deserve more informed comments than this.

*M. H. Lewis, DDS, DDPH,
Executive Director,
Saskatchewan Dental Plan*

Editor's Note: In the April issue of the Journal we published a letter from Mr. Laurent L. Desjardins, Manitoba's Minister of Health and Social Development, regarding this editorial and reprinted in full his letter to the editor of the Winnipeg Free Press.

Indocid

Indocid is an anti-inflammatory preparation used mostly with arthritic conditions and has been on the market about 10 years.

I would appreciate hearing from others who may have had an experience similar to that described below.

Cases: Two adult Caucasian females in their late 50's, both suffering hip conditions and both expecting to go for hip operations. Both had had dentures for approaching 20 years.

Patients arrived at the office with sore lower ridges. On examination the tissue looked raw and bruised, similar to a high bite. One patient had been to a denturist who had put in a soft liner which did seem to cause an open bite. The other had had no treatment and,

due to her difficulty in getting around, never returned for treatment. However, I kept in touch with her.

"Hydro-cast" was used with the first case and it seemed O.K. so the denture was relined. After about 10 days it was just as it had been in the first place. Hydro-cast was used for three months — irritation was intermittent.

I was about to attempt another reline when I thought to question about drugs. Indocid was the only drug the patient was taking. She decided to try not using it as she did not like it and, in about five days, her mouth cleared. She has now been off the Indocid for three months and her mouth is comfortable.

On contacting the second patient I discovered that she too was on Indocid. She stopped taking the drug and her mouth cleared up.

If others have had similar experiences regarding Indocid it would be worth following up. If not, it is only a coincidence.

*G. Cecil Walkey, DDS,
5873 Sycamore St.,
Duncan, British Columbia V9L 3E3*

Head and mouth protection

The following letter was prepared by the education committee of the Corner Brook Branch of the Consumers' Association of Canada and was sent out to parents, teachers and coaches throughout the area. The chairman of the committee forwarded a copy of the letter to the Journal in the hope that its publication might prompt members of the Canadian Dental Association to warn their patients to take extra care when participating in sports.

The education committee of the Corner Brook branch of the Consumers' Assoc. of Canada appeals to you to ensure that children wear proper head and mouth protection for all playing of hockey, whether in supervised games on ice, or games of street hockey.

In past years, regulations have become strictly enforced for players of minor hockey. In fact, in most areas of Canada, complete face protection will

be mandatory for next season. The protection will include both the wire mesh mask, and the clear vinyl shield.

How many parents who endorse completely these rules neglect to see that this same equipment is used for non-organized hockey, or hockey played on the street or in backyards? While parents usually see to it that children play with a sponge puck or ball rather than a hard puck, few parents remember that a hockey stick, too, can cause serious injury.

I know, for I am such a parent. Recently my son was injured in an innocent backyard game, losing teeth which cannot be permanently replaced until he is an adult. Not only has this injury been costly, but it has meant that he must somewhat alter his eating and playing habits, although he has been temporarily fitted with artificial teeth skillfully molded by our most competent dentist. Though we went to great lengths to provide good dental care, good nutrition, and adequate protection

while he played organized hockey, we completely neglected another field of possible dental risk. Now he must go through life with less than a complete set of his own teeth.

Although hockey season is almost over, street hockey is played throughout the year. There is perhaps even more danger in such games than in supervised play. Why, then, are we so strict with regulations for protection during organized play, but so imprudent to believe that injuries cannot occur elsewhere?

I again urge you to see that proper headgear is worn by every child who plays hockey in any form. Don't let your child become another hockey accident statistic. If even one child will avoid injury because of my appeal, then my son's injury will not have been completely in vain.

*Diana J. Taylor,
Education Chairman,
Corner Brook CAC,
P.O. Box 41, Newfoundland.*





Dr. Frank Shuler (left), president of the American Dental Association, is shown with CDA president, Dr. Michael Crompton, and ADA president-elect, Dr. Frank P. Bowyer, during the official opening of the Canadian Dental Association's Ottawa headquarters building, March 10. On March 11 and 12, officials of the Canadian and American Dental Associations met in Ottawa to confer on matters of common concern.

OFFICIALS OF CANADIAN AND AMERICAN DENTAL ASSOCIATIONS MEET IN OTTAWA TO DISCUSS ISSUES OF COMMON CONCERN

Top officials of the Canadian and American Dental Associations met in Ottawa March 11 and 12 to confer on matters of common concern and to explore avenues of mutual assistance.

Dr. Michael J. Crompton, President of the Canadian Dental Association, chaired the conference. CDA Executive Council members in attendance were: Dr. D. L. Rife of Toronto, President-Elect; Dr. H. L. Mussells of Westmount, Quebec, Past-President; Dr. R. L. Moran of Toronto; Dr. C. Dexter of Halifax; Dr. H. A. Gray of Medicine Hat, Alberta; and Dr. Clyde Covit of Montreal, Chairman of the Board of the Quebec Dental Surgeons Association. Mr. Lloyd A. Stevenson, CDA Executive Director, was also in attendance.

American Dental Association President Frank F. Shuler headed the ADA delegation which consisted of eight members of the Board of Trustees Committee on Inter-Agency Affairs and three ADA staff members. Members of the Inter-Agency Affairs Committee included: Dr. Frank P. Bowyer, ADA President-Elect; Dr. George P. Boucek; Dr. Joseph P. Cappuccio; Dr. Floyd E. Dewhirst; Dr. John M. Faust; and Dr. C. Gordon Watson, ADA Executive Director. ADA staff members at the conference were: Bernard J. Conway, Assistant Executive Director, legislation and legal affairs; Eric M. Bishop, Assistant Executive Director, dental health; and Lois L. Schuhrke, Director, division of continuing education registry.

Illegal dentistry led the list of mutual

concerns which CDA officials discussed with the Americans. Other topics examined included: national health programs; dental prepayment; peer review systems; health service agencies; continuing education; accreditation; the ADA Public Education Program; professional communications; political actions; and the 65th Annual World Dental Congress of the Fédération Dentaire Internationale to be held October 22-28, 1977, in Toronto.

Timing of the conference coincided with the official opening of the Canadian Dental Association's new headquarters building in Ottawa. ADA President Frank Shuler presented greetings at the ceremony and presented a commemorative gift to the CDA on behalf of the American Dental Association.



You've finished his fluoride treatment. Now let Colgate's fluoride take over.

Colgate's* MFP^{*} fluoride gives your patients extra protection to fight decay between check-ups.

It's a fact. Our clinical tests have shown that the regular use of Colgate with MFP fluoride **alone** will significantly reduce the incidence of new caries. Used in conjunction with your topical application therefore, it follows there could be an even greater reduction. Colgate with MFP provides specific and significant advantages.

1. Regular use of Colgate makes

teeth more **resistant to decay**. We believe that Colgate's MFP (sodium monofluorophosphate) is effective in converting tooth enamel apatite into fluorapatite (a calcium fluorophosphate) because of the chemical similarities of the two.

2. While the staining of teeth has been a problem associated with some dentifrices, it is reassuring to know that this is not a problem with

Colgate MFP.

3. Colgate MFP is known for its **fluoride stability**. Sodium monofluorophosphate is still present and effective even after three years.

So after you've completed your fluoride treatment, tell your patients about the protection that Colgate Dental Cream with MFP can provide. And give them a new fighting chance against decay.



"Colgate has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."

*TM Reg'd.

Colgate-Palmolive Canada.

ACADEMY OF GENERAL DENTISTRY WILL MEET IN MONTREAL

Dr. Donald L. Rife, President-elect of the Canadian Dental Association, will welcome the Academy of General Dentistry to its first annual meeting to be held outside the United States during the opening session of the AGD House of Delegates in Montreal, Quebec, on June 25, 1977.

Dr. Rife's keynote address, "Dental Problems Common to the United States and Canada," will be delivered in Le Grand Salon of the Queen Elizabeth Hotel, headquarters for the meeting.

The Academy's June 25-29 meeting will also celebrate the AGD's Silver Anniversary as "The Organization of Family Dentists." The AGD is the second largest dental organization in the United States with a membership totaling over 20,000.

Nine Canadian Dentists will be awarded Academy Fellowships with over 200 other AGD members at the Academy's 16th Annual Convocation Ceremony on June 27. Fellowship in the Academy is an earned honor requiring five consecutive years of membership and 500 hours of postgraduate education.

Dr. Thomas W. McKean of Willowdale, Ontario, scientific sessions chairman for the meeting, said the Silver Anniversary meeting will offer participants "the finest scientific sessions ever presented by the Academy."

To top off the program, three Canadian experts, Drs. Thomas W. McKean, Melvin D. Charendoff and John F. Pepper, will present a step-by-step, detailed seminar on the Management of all types of dental trauma in "A Symposium on Dental Trauma" on Tuesday, June 28.

Dr. George A. Morgan, one of the world's foremost experts on radiographic interpretation and diagnosis, will present a half-day seminar with Dr. Paul R. Morgan on "X-Ray Interpretation, Clinical Diagnosis and Treatment" on Wednesday, June 29.

Obtaining the most security and profit from the dental practice is of high interest to all dentists, and Dr. Jerry A. Argovitz of Houston, Tex. will devote one and one-half days to this topic. The renowned lecturer on dental and medical finances will be assisted by his colleagues Dr. Ronald C. McConnell,

Mr. Robert W. Scharar and Mr. Marc S. Geller in the first Albert L. Knab Memorial Lecture, "The Success System That Can't Fail," on June 28-29.

This year's Annual Meeting participants will again have the opportunity to attend one of the most popular events of past Annual Meetings. Over 25 table clinicians have been selected by Dr. John P. Essepian, table clinics chairman, to present new dental techniques and procedures on Monday morning, June 27.

The Annual Meeting theme, "A Family Meeting for the Family Dentist," was selected to encourage dentists to bring their families to Montreal. Numerous social activities for all age groups have been especially planned by the AGD General Arrangements Committee, headed by Dr. W. Robert Patrick of Trenton, Ontario.

All dentists — AGD members and nonmembers alike — are invited to bring their families to Montreal. Registration information can be obtained from the Academy's central office at 211 E. Chicago Ave., Suite 1244, Chicago, Ill. 60611.

CANADIAN DENTAL ASSOCIATION REACTS TO GOVERNMENT BAN ON SACCHARIN

The following press release, prepared by Dr. Alexander E. MacLeod, Chairman of the Canadian Dental Association's Council on Information Services, was issued immediately after Health Minister Marc Lalonde's announcement that saccharin would be banned in Canada:

"The Canadian Dental Association is concerned about the consequences of Mr. Lalonde's sudden announcement banning the use of saccharin in Canada. If refined sugar is used as a saccharin substitute, tooth decay is certain to increase in the population. This would put back years of effort by Canadian dentists to prevent decay from starting, not to mention adding to the cost of

treating dental disease both for the general public and the government.

"The ban would also have serious effects for the use of toothpaste and some mouthwashes, which contain a small amount of saccharin to make their taste pleasant. We are unaware of any other safe substitute for saccharin at the present time. Hence toothpaste made without saccharine would be so bitter that it is most unlikely people could use it.

"We suggest that the Canadian Dental Association's committee on therapeutics and government officials consult with representatives of the pharmaceutical industry with a view to devising a solution which will be in the best public interest."

X-ray unit on Health Protection Branch report

Health and Welfare Canada's Health Protection Branch recently released the list of convictions, recalls and seizures in Ontario during the months of October, November and December, 1976.

The report covers the activities of the Health Protection Branch which is one of the federal government bodies responsible for the regulation of importation, production and sale in Canada of foods, drugs, cosmetics, medical devices and radiation emitting devices.

One of the items on the list was the Oralix 65 Optident Dental X-ray Unit, manufactured by Philips Electronics Ltd., Scarborough, Ont. The unit was charged with failure to comply with section 4(b) of the Radiation Emitting Devices Act.



Two of your best weapons for fighting tooth hypersensitivity

The 2-second test and Sensodyne®

A survey of dentists indicates that tooth hypersensitivity can be found in every seventh patient in the average general practice.¹ But there may be many other undiagnosed patients who don't complain because they consider it "normal" or unimportant. So they may suffer in silence, risking the possibility of more serious pathology.

Tooth hypersensitivity vs. preventive home care

Patients with sensitive teeth tend to avoid brushing sensitive areas.¹ "This appears to be related to the fear of causing pain . . . with the toothbrush."² And when, for any reason, "toothbrushing is stopped and the bacterial mass (within the plaque) is allowed to accumulate . . . clinical signs of gingival inflammation become apparent."³

A 2-second test for tooth hypersensitivity

That's why diagnostic testing for hypersensitivity — before gingival involvement — is so important. A 2-second jet of cold air or water, or contact with an explorer, will — in the absence of caries or other pathology — usually elicit an involuntary painful response if sensitivity is present.

Treatment is often simple and effective

Fortunately, home treatment with SENSODYNE is highly effective. Used daily in place of a regular dentifrice, SENSODYNE brings substantial relief for up to 90 percent of patients and with good to complete remission of painful response in four out of five patients. And SENSODYNE can help restore the plaque-control benefits that come with routine brushing.

References: 1. Data on file, Block Drug Company, Inc. 2. Abstract of the Symposium on Mechanisms of Pain and Sensitivity in the Teeth and Supporting Tissues, Fairleigh Dickinson University School of Dentistry, Nov. 12-13, 1973, p. 15. 3. Goldman, H. M. and Cohen, D. W.: An Introduction to Periodontia, Fourth Edition, The C. V. Mosby Company, St. Louis, 1969, p. 74.

Sensodyne®



Professional Division
Block Drug Company (Canada) Limited
36 Northline Rd., Toronto, Ontario M4B 3E3
Quality products for Dental Health



AMERICAN DENTAL ASSOCIATION VOICES CONCERN OVER FDA BAN ON SACCHARIN

The American Dental Association has voiced serious concern over the Food and Drug Administration's proposal to ban saccharin, the only artificial sweetener permitted on the U.S. market.

Public outcry against the proposed ban prompted overnight hearings March 21-22 by the House Subcommittee on Public Health and Environment on the so-called Delaney amendment.

The Delaney amendment apparently requires the FDA to ban agents found to induce cancer when ingested in humans or animals — no matter what the dosage. The FDA recently proposed the ban on saccharin because tests in Canada have shown that large doses of saccharin can cause cancer in rats.

In a statement to the subcommittee, the Association declared that the Delaney amendment "is too restrictive and should be modified with substitution of less restrictive, more rational legislation that recognizes human realities and serves human needs.

"It seems both questionable and woefully inappropriate to apply this amendment to saccharin when some 80 years of use in humans has never resulted in establishing a cause and effect relationship between saccharin and cancer.

"Additionally, the massive doses employed in the animal study do not

appear to be relevant to the current estimated intake of saccharin by humans."

The Association's statement noted that the marketing of sugarless confections was in part an outgrowth of the dental profession's attempt to restrict the sugar intake of children. Dentists have long been aware of the substantive body of scientific evidence linking frequent intake of sweets with dental decay.

For this reason, the ADA statement points out, "the availability of a non-sugar sweetener for use in food, beverages and drugs which does not promote dental decay is of considerable importance to the dental health of this nation."

Furthermore, artificial sweeteners also are important in the continued marketing of routinely used drug products such as dentifrices, fluoride preparations and children's vitamins, the statement noted. "Use of sugar in such a product would only contribute to dental decay."

The National Cancer Institute was among the many health organizations which questioned the ban of saccharin. Dr. Guy Newell, acting director of the Institute, testified before the subcommittee that: "Based on human data, the Institute does not believe saccharin is a potent carcinogen for humans, if it is one at all."

UK DENTISTS TACKLE KOJAK ON THE ISSUE OF LOLLIPOPS

Television detective Kojak will no longer suck lollipops in the popular series, according to organizers of a dental health campaign for under eight year olds in London, England.

A spokesman for the British Dental Association recently reported that the Association had made representations to the television network through the

American Dental Association and had been assured that the lollipops would be dropped from the series.

Sir Rodney Swiss, president of the General Dental Council, said that advertising of sweets on television did not help the work of the dentist and complained that Kojak and his lollipops had not been very helpful either.

CDA appoints new chairman of Council on Information Services

The Board of Governors of the Canadian Dental Association has announced the appointment of Dr. Alexander E. MacLeod of Halifax as Chairman of the Council on Information Services. Dr. MacLeod succeeds Dr. Brad Chapple of Port Hope, Ontario, who recently resigned as Chairman but will continue as a member of the Council.

The son of a dentist, Dr. MacLeod was educated at Glasgow, Dalhousie and Harvard universities. He is a member of the Dalhousie dental faculty where he teaches courses in Communication and Practice Management. He founded the Medical Arts Dental Group of associate dentists in Halifax in which he practises general dentistry on a part-time basis.

He has participated in radio and television interviews explaining to the general public the special dental needs of the handicapped and aged in Nova Scotia.

DEATHS

Britton, Garnet Lyons, 76. Guelph, Ontario. University of Toronto, 1944. 24-10-76.

Carty, John Henry, Kingston, Ontario. University of Toronto, 1954. 2-9-76.

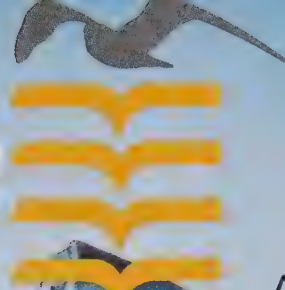
Graham, C. C., 83. Russell, Manitoba. Royal College of Dental Surgeons, 1917. 13-11-76.

Kennedy, John Dennis Lillis, 51. Brandon, Manitoba. McGill University, 1954.

Sivers, William Mee, 95. Toronto, Ontario. Royal College of Dental Surgeons, 1905. 26-2-77.

Wagg, Donald Arthur, 53. Toronto, Ontario. University of Toronto, 1950. 21-3-77

The "gull wing" turbine



A breakthrough
in aerodynamic design.

Instead of
conventional *straight*
turbine blades...

blades with a
"gull wing" contour.

The performance is amazing!

No larger than a
miniature handpiece...
but more torque, more speed,
more controllable cutting
performance than standard
size handpieces.

This *and more* in the
new DENTSPLY AIROTOR "GW"TM
handpiece.



The
Dentsply
AIROTOR[®]
"GW"TM
HANDPIECE

Ask your Dentsply dealer.

DENTSPLYTM
Equipment

D Dentsply International Inc., York, Pa.

© 1977 Dentsply International Inc.
All rights reserved.

UNIDENTIFIED HOMICIDE VICTIM

On January 23, 1977, the body of a young man was found over the edge of Southern Trans-Provincial Highway 3, some 25 miles east of Hope. British Columbia.

All avenues of investigation such as fingerprint searches, enquiries, examination of missing persons reports, and news media releases, have failed to identify the deceased. He is described as: male, Caucasian, 25-35 years, 5'9½", approximately 160 lbs., dark brown hair worn collar length, and side burns, dark brown mustache, neatly trimmed, well nourished, and in good physical condition, well trimmed fingernails.

This young man, who was brutally murdered, had extensive dental work, and wore a partial upper plate. To assist in this area, the co-operation of the Dental College was solicited, and Dr. Walter H. Sussel, D.D.S., Chilliwack, B.C., has done an extensive examination. Utilizing the international num-

bering system, his findings are as outlined:

(1) The restorations on #47 and #46 appear to have been done by the same dentist probably in one appointment time. #27 has similar characteristics. They appear "newer" than the other fillings and were probably the latest dentistry carried out. The other restorations appear older with similar characteristics especially #17, #37, and #38, indicating a different operator. Restorations on #14 and #33 are indeterminant.

(2) The extraction sites of #12 and #26 were well healed, indicating other than recent removal. Teeth #36 and #16 were lost very early (age 6-12 years) as #37 and #17 have assumed the anatomical position of the extracted teeth without "tipping". Tooth #11 was found to be fractured approximately midway up the root. As there was no evidence of soft tissue injury or

bone lesion it may be surmised that this occurred post-mortem.

(3) The dentition and supporting structures were generally unremarkable. The mouth was reasonably well cared for from the standpoint of required dental restorations. There was some evidence of horizontal bone loss in both maxilla and mandible. This is consistent with periodontal disease generally not manifest to this extent in a young person. Eruption data and root apices would indicate the deceased to be in middle to late twenties. Staining seen throughout the mouth is consistent with fairly heavy smoking. Missing teeth #12 and #26 were replaced by a removable partial denture. Design is shown on the accompanying photographs. Construction is cast chrome-cobalt frame with plastic teeth. No distinguishing marks were noted on the appliance; however, it is of the type and design commonly seen in North America. Moderate bilateral mandibular torti are noted.

It is requested that a careful study be made of Dr. Sussel's findings, and the attached photographs, bearing in mind that the restoration work may have been performed by more than one dentist.

If an identification is made, kindly contact the R.C.M. Police, Serious Crime Unit, Vancouver, B.C., Telephone: 666-6211, Local 211 or 212 or your nearest Detachment.

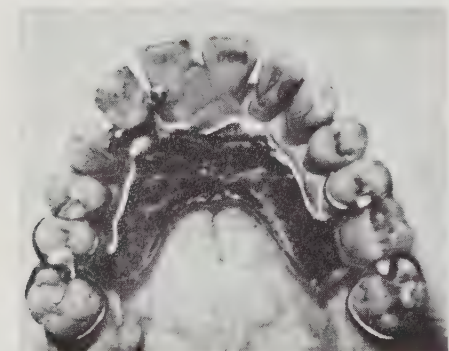
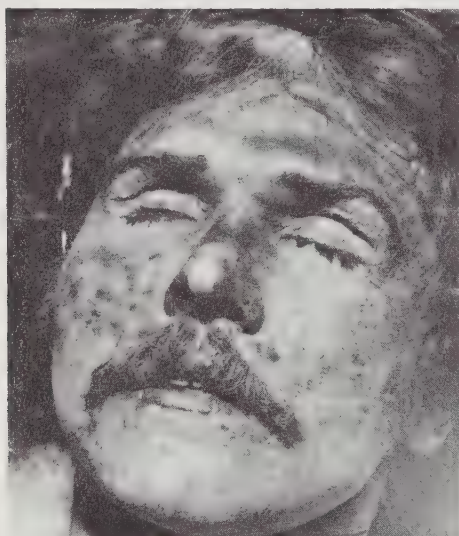
CDA Retirement Savings Plan

Unit values of the Canadian Dental Association Retirement Savings Plan stood as follows on March 31, 1977:

<i>Common Stock Fund</i>	\$28.334
<i>Fixed Income Fund</i>	\$19.130
<i>Guaranteed Fund</i>	\$13.492

Total assets (market value) of the plan were \$26,259,657.92.

Fur further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ont. M5R 2P2.



Beautiful and tough.

Caulk® has what it takes.

Caulk® Characterized Lucitone®

for unsurpassed
denture esthetics.



Caulk® Lucitone® 199®

for unsurpassed
denture toughness.



For more
information
check number 101

Life can be beautiful when you prescribe Caulk Characterized Lucitone.

For patients who want the ultimate in lifelike translucence, gingival shading and vein simulation in realistic dentures, it's Caulk Characterized Lucitone. The difference between an ordinary "pink denture" and Characterized Lucitone is unmistakable to the anxious patient. Patients want to be beautiful. Naturally.

For the hard knocks in life prescribe Caulk Lucitone 199.

For patients who take a lot of hard knocks in life, lifelike Caulk Lucitone 199 is the one. It combines a polymer (rigid plastic) with an elastomer, to provide great impact strength, offering protection against accidental damage. Naturally.

**These products are available upon your prescription
from better dental laboratories.**



NUTRITION AND ORAL HEALTH IS THEME OF LECTURE BY DENTIST FROM NIGERIA

Professor Cyril O. Enwonwu of Nigeria will present a lecture on "Nutrition and Oral Health" on Thursday afternoon, October 27, as part of the Toronto Congress scientific program.

With the main focus in dentistry shifting from a disease-oriented to a health-oriented discipline, emphasizing prevention rather than cure, greater emphasis must be placed on the role of nutrition. Still it would be presumptuous to implicate nutritional factors alone in the genesis of dental disease without recognizing that dental caries and periodontal disease are the end results of complex interactions between the oral environment, host tissue resistance, and the microflora of dental plaque.

Dr. Enwonwu's presentation will take into consideration all the component factors involved in oral health. This will include the essential nutrients for building resistance to caries-promoting factors, the defective immunobiologic responses in states of malnutrition with subsequent effect on periodontal health, and evidence of the relationship between the chemical composition of saliva and the rate of flow from saliva-producing glands.

With each of these factors demonstrated to be playing independently important roles in oral health, good

nutrition will be discussed as the common basis for proper function in all areas.

Professor Enwonwu received his Master of Dental Surgery degree from the University of Bristol, England, in 1966, his Doctor of Science degree from the Massachusetts Institute of Technology in 1968, and his PhD from Bristol University in 1976. He served as a professor in Oral Biology at the University of Washington for six years and is currently professor of Biochemistry (Medical) and administrative head of the Engugu Campus at the University of Nigeria.

Professor Enwonwu is an active member of a large number of regional, national and international organizations, including: the Biochemical Society of Nigeria; the American Institute of Nutrition; the International Association for Dental Research; the American Association for the Advancement of Science and the British Dental Association. He is currently a consultant to the Scientific Assembly Committee of the Fédération Dentaire Internationale.

Professor Enwonwu has gained international renown as an author and lecturer.

LECTURE WILL FOCUS ON PHOTOGRAPHY

Dr. George E. Sparrow of Toronto will address delegates attending the World Dental Congress on the subject of "Photography in Dentistry and at Play".

His one-hour presentation will show the similarities between photography in the office and photography for fun and will provide guidelines for: standardizing your technique; a working technique for intra- and extra-oral photo-

graphs, and copying documents, slides and x-rays; and, photography for fun.

Dr. Sparrow received his DDS degree from the University of Toronto. He is a member of the Photographic Society of America and is Nature Salon Chairman of the Toronto Camera Club. Honors achieved in the field of photography include: the Karsh Trophy; the K. B. Jackson Trophy; the MacGregor Trophy; and, the Toronto Camera Club Silver Medal (Pictorial).

Don't wait. Register Now.

Don't wait. Since Congress attendance figures are expected to reach record levels, early pre-registration is strongly recommended. For your convenience a registration and hotel reservation form is included at the back of this issue. Fill it out and return it, with your cheque, today.

ALPHA OMEGA FRATERNITY

The Toronto Alumni Chapter of Alpha Omega cordially invites all fraters and their spouses who are attending the F.D.I. convention to join us at our annual brunch Sunday, October 23, 1977. Our hospitality room will be open Monday evening, October 24.

For further information please contact:

Dr. Stephen Z. Ross
c/o Alpha Omega Fraternity,
2016 Bathurst Street,
Toronto, Ontario M5P 3L1
Canada.

INAUGURATION OFFICIELLE DE L'ADC

L'Honorable Marc Lalonde, ministre de la Santé et du Bien-être social, a officiellement inauguré le nouveau siège social de l'Association dentaire canadienne lors d'une cérémonie spéciale tenue au cours de la soirée du 10 mars 1977. Plus de 150 représentants de la profession dentaire et leurs invités des professions connexes ont assisté au dévoilement d'une plaque commémorant cette occasion.

Aux côtés du ministre, les personnalités suivantes assistaient à la cérémonie: Les Drs H. L. Mussells, président sortant de l'Association et président du comité responsable du financement et de la construction du nouvel immeuble;

Michael J. Crompton, président de l'ADC; et Frank Shuler, président de l'American Dental Association.

A la suite du dévoilement de la plaque, le Dr Crompton s'est adressé à l'assemblée. Il a déclaré que le déplacement du siège social de l'ADC de Toronto à Ottawa permettait à l'administration de l'Association d'être à proximité d'organismes gouvernementaux ainsi que des sièges sociaux d'autres groupements professionnels du domaine de la santé, ce qui améliorera les communications entre la profession dentaire et les autres organismes canadiens oeuvrant dans le domaine de la santé.

Le nouvel immeuble de deux étages (rez-de-chaussée plus en étage) est situé à 1815 Alta Vista Drive, du côté nord du siège social de l'Association médicale canadienne. Cet édifice très attrayant, à la charpente en acier et au revêtement de brique, est situé sur un terrain aménagé comme un parc, agrémenté à l'arrière d'un ravin boisé.

Il y a au nouveau siège social toute la place qu'il faut pour y installer les nombreux services offerts par l'Association à ses membres et les nombreux programmes de l'ADC destinés à l'amélioration de la santé dentaire.

“LA DENTUROLOGIE: UN ATTRAPE-CONSOMMATEUR!”

“La denturologie: un attrape-consommateur!” a déclaré le Dr Claude A. Pawelek, dentiste de Houston, président de l’“Academy of General Dentistry” aux participants de la Conférence sur l'exercice illégal de l'art dentaire (Conference on the Illegal Practice of Dentistry) de l'American Dental Association.

La conférence, qui a eu lieu à Chicago du 7 au 9 février 1977, était conjointement parrainée par l'American Dental Association, l’“Academy of General Dentistry” et la “Federation of Prosthodontic Organizations”; elle avait été organisée en vue de développer des méthodes de combattre la légalisation de la denturologie — c'est-à-dire la prescription et la fabrication illégale d'appareils dentaires par des personnes non-qualifiées autres que des dentistes diplômés. La conférence comprenait des rapports du Canada, où les techniciens dentaires sont autorisés à prescrire aussi bien qu'à fabriquer des appareils dentaires destinés au public, sans aucune participation de la profes-

sion dentaire, ainsi que des rapports provenant de régions des États-Unis où l'on essaye actuellement de faire légaliser cette procédure.

Le Dr Pawelek souligne que la denturologie, souvent justifiée pour les prix inférieurs auxquels reviennent ses services prothétiques, pourrait en fait aboutir à des services “de qualité dangereusement inférieure aux normes acceptables” pour les personnes âgées et aux revenus faibles. Le Dr Pawelek, notant que l'Académie a des adhérents canadiens qui ont exposé les résultats de la légalisation de la denturologie, a déclaré: “Les lésions précancéreuses et cancéreuses passent inaperçues, les patients obtiennent des dentiers qui sont inefficaces ou nuisibles et de graves maladies buccales ne sont souvent pas soignées.”

Dans le cadre d'une comparaison entre le concept d'un dentiste diplômé et qualifié qui diagnostique, traite et prescrit un prothèse approprié et la “vente automatique” de dentiers, le Dr Pawelek prédit: “Ce sont les personnes

âgées et économiquement faibles qui seraient soumises, une fois de plus, à ce que notre société a de pire à offrir. Il y aurait de nouveau un double standard et les défavorisés y perdraient ENCORE.” Il a ajouté que selon les rapports du Canada, les “prix inférieurs” dont parlaient les défenseurs de denturologie lorsque la législation a été proposée ont tellement augmenté qu'ils sont aujourd'hui comparables à ceux que demandent les dentistes.

Le Dr Pawelek a déclaré qu'il était confiant que la profession saurait trouver une solution à la pression exercée dans le but de changer les règlements régissant l'exercice dentaire en faveur de la denturologie, et il a ajouté que “dans le cadre de la structure diversifiée de l'exercice dentaire aux États-Unis, il y a un grand potentiel de flexibilité — la profession dentaire peut s'adapter à diverses exigences et faire face au défi de procurer les services nécessaires à des prix abordables aux personnes à faibles revenus.”

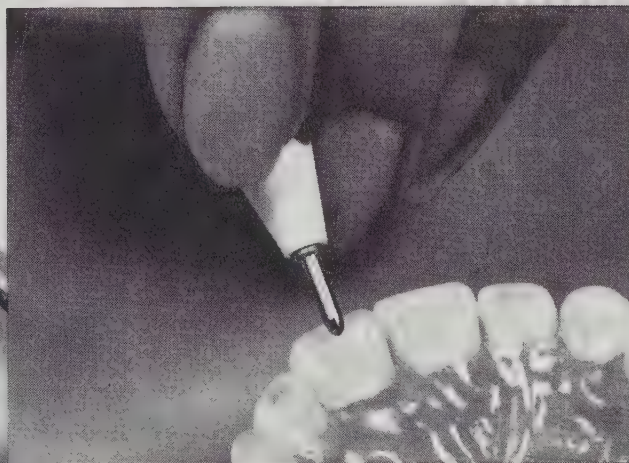
**C'est ici
que tout
nouveau dentier
doit faire
ses preuves.**

Cherchez le croissant.

Demandez à votre assistante d'examiner les
linguales antérieures. Si ce sont des dents
TRUBYTE®, elle verra une petite marque en
forme de croissant.

Si elle ne trouve pas le croissant,
le dentier ne comprend pas de
dents Trubyte.

Quand vous payez pour
avoir ce qu'il y a de
mieux, vous devez
obtenir ce qu'il
y a de mieux.



TRUBYTE®

*Créateur de d'excellents produits
pour l'art dentaire.*

D™ Dentsply Canada Ltd.
© 1976 Dentsply International, Inc.
Tous droits réservés

Le croissant est une marque déposée de Dentsply International Inc. York, PA

Cherchez le croissant (☾) sur ces marques populaires Trubyte®

ANTERIEURES▶	Bioblend®	Bioform®	Biotone®	New Hue® V.F.	
--------------	-----------	----------	----------	---------------	--

LES CERCLES D'ETUDES

A notre connaissance, le 1er cercle d'études a été fondé à New-York en 1919. L'un des instigateurs fut le Dr. Herman Chayes, prosthodontiste.

On limite à une trentaine le nombre de membres qui sont pour la plupart des généralistes, mais les études sont filtrées par quelques membres spécialisés (endodontie, prosthodontie, périodontie et chirurgie). Au début de chaque année, les membres décident d'un sujet d'étude et ils "vident" la question, au besoin en invitant des conférenciers.

Il nous semble qu'à long terme cette formule de Columbia Dental Study Club soit la meilleure.

Lorsque, dans un secteur donné, un cercle d'études est formé avec assez de membres pour assurer une survie — compte tenu des absences occasionnelles — il vaut mieux approfondir un sujet, sans toutefois tomber dans le domaine purement spécialisé, que de papillonner sur des sujets variés sans considérer, d'une réunion à l'autre, les

liens avec les sciences de base, les implications diagnostiques, les modes de traitement, les facteurs d'exécution des soins etc. ... et ce sont là des conditions essentielles pour qu'une conférence puisse effectivement se traduire dans le rôle thérapeutique que nous devons jouer dans nos cliniques privées.

Il est utopique de penser qu'un grand nombre de cercles d'études vont subitement s'organiser. Pourtant, il s'agit là d'une formule excessivement enrichissante et nous croyons que l'Ordre des dentistes trouverait, en favorisant de telles formations, un champ d'action qui entrerait normalement dans ses intentions d'encourager l'éducation continue.

Nous suggérons que l'O.D.Q., étudie cette possibilité.

Dr. Robert Lambert

1. J.A.D.A., Mai 1976.

Les dentistes du Royaume-Uni censurent Kojak

Selon les dirigeants d'une campagne de santé dentaire pour les enfants âgés de moins de huit ans organisée à Londres, Grande-Bretagne, le fameux détective de la télévision, Kojak, ne sucera plus de succettes.

Un porte-parole de la British Dental Association a déclaré que l'Association avait entrepris des démarches par l'entremise de l'American Dental Association et que les studios de télévision s'étaient engagés à éliminer les succettes du programme.

Sir Rodney Swiss, président du General Dental Council, a déclaré que la publicité télévisée qui présente bonbons et friandises ne secondait guère les efforts des dentistes et s'est plaint que Kojak et ses succettes, lui non plus, n'était pas d'un grand secours.

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 31 mars 1977:

<i>Fonds d'actions ordinaires</i>	\$28.334
<i>Fonds à revenu fixe</i>	\$19.130
<i>Fonds avec garantie</i>	\$13.492

L'avoir total (valeur marchande) du régime se montait à \$26,259,657.92.

Pour de plus amples renseignements, veuillez écrire à CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ont. M5R 2P2.

L'assemblée annuelle du Conseil d'administration

L'assemblée annuelle du Conseil d'administration de l'Association dentaire canadienne aura lieu les 29 et 30 septembre 1977 au "Delta's Inn of the Provinces", 360 rue Sparks, Ottawa, Ontario.

NOUVELLES BREVES: LA METHODE SARGENTI

Le Dr Franklin S. Weine, professeur au département d'endodontie du Loyola University School of Dentistry (Chicago) s'élève énergiquement contre les méthodes nouvelles de pratique en endodontie. Le N2 (la méthode Sargenti) fait l'objet d'une critique excessivement sévère.* Plusieurs pays défendent l'emploi du N2, le "U.S. Veterans Administration's Department of Medicine and Surgery" n'autorise pas le traitement endodontique par la méthode Sargenti, "le Food and Drug Administration" applique la loi défendant le transport du N2 entre les états, la production du N2 est interdite en Californie, le "Accepted Dental Therapeutics" juge le N2 comme étant inacceptable, la méthode Sargenti n'est enseignée dans aucune école dentaire américaine, aucun professeur de quelque faculté que ce soit n'a approuvé le N2.

Le Dr. Weine estime qu'il n'a jamais vu pareille unanimité dans la désapprobation d'une technique. Le Dr Fred Seals du Northwestern University Dental School semble beaucoup plus souple dans son jugement et accorde au Dr. Sargenti une valeur certaine si certains principes de base de la méthode N2 peuvent être acceptés. Selon l'enseignement, écrit-il, "cette méthode ne devrait pas fonctionner et elle doit aboutir à l'échec. Mais tel n'est pas le cas." En fait, beaucoup de généralistes l'emploient avec succès apparent.

Le Dr Seals conclut toutefois en disant que si la méthode Sargenti est la plus simple cela ne revient pas à dire qu'elle soit la meilleure. (*Dental Student*, Nov. '76).

Dr. Robert Lambert

Instructions to Contributors

The Journal of the Canadian Dental Association is currently soliciting research and clinical articles for publication. Interested contributors are asked to use the following outline of requirements when preparing manuscripts.

Manuscripts: Manuscripts should be submitted to the editor with a covering letter requesting consideration for publication in the Journal. Send two copies — original and a carbon — typewritten with all material (text, quotations, tables, legends, references, etc.) double-spaced, on one side of the sheet, $8\frac{1}{2} \times 11$ inches, with ample margins on all four sides. The author should always retain a carbon copy of material submitted. Every article should contain a summary of the contents.

Original articles are considered and accepted subject to the understanding that they are submitted solely to this Journal, and will not be reprinted without the consent of both the editor and the author.

The editor reserves the right to fit articles within the space available and to make usual editorial alterations in manuscripts; these include such changes as are necessary to ensure correctness of grammar and spelling, clarification of obscurities or conformity to Journal style. In no case will major changes be made without prior consultation with the author. The senior author will receive either the edited manuscript or galley proofs for checking prior to publication.

Article Titles Make article titles descriptive but as concise as possible. Long titles discourage reading, present

typographical and layout problems and create difficulties in library indexing.

References: Authors should limit references to published work to the minimum necessary for guidance to readers wishing to study the subject further. They should not quote articles they have never seen. Except in review articles, the maximum number of references should not be more than 25. References should be numbered in the text and should be set out in a separate numbered list at the end of the article.

For journal references, give the author's name, article title, journal name, volume number, first page of article, and year of publication:

1. Gibb, G. H. Methods of achieving improved amalgam restorations. *J Canad Dent Ass* 30:413, 1964.

For books give the author's name, book title, location and name of publisher, year of publication:

2. Kilpatrick, H. C. Work simplification in dentistry. Ed. 2. Philadelphia, Saunders, 1964.

Illustrations: Line and halftone illustrations should be of high quality for satisfactory reproduction.

Photographs — Handle photographs carefully. Do not bend, fold or use paper-clips. Photographs should be unmounted, untrimmed, good, sharp, black and white glossy prints, preferably not larger than 10×8 inches. Color work can only be published at the author's expense. Magnification of photomicrographs must always be given. Photographs must not be written on or typed on. On the back of each photograph, very lightly and in pencil, write the author's name, the figure number and indicate the top edge. If a

figure contains two or more photographs, do not mount the parts; on the back of each photograph write very lightly in pencil the figure number and part letter (Figure 1a, etc.) and indicate the top edge. Patients must not be recognizable unless the written consent of the subject to publication has been obtained.

Drawings — Figures, graphs, charts and diagrams should be drawn and lettered in india ink. Lettering must be large enough to be read after the drawings are reduced to column width (small, simple drawings) or page width (larger, more complex drawings).

Legends — Figure legends should be typed as a group on a separate sheet. They should be separate from the text of the article and from the illustrations.

Tables: Each table should be typed on a separate sheet. Tables should be numbered consecutively and tailored to fit within column width or page width. Table title and table footnotes should be on the same page with the table. Do not show vertical rules in tables.

Permission and Waivers: These should accompany the manuscript when it is submitted for publication. Permission of author and publisher must be obtained for the direct use of material (text, photos, drawings) under copyright that is not your own. Up to one hundred words of prose material usually can be quoted without getting permission, provided the material quoted is not the essence of the complete work. Waivers must also be obtained for the publication of photographs showing persons, unless faces are masked to prevent identification. Waiver forms are available from the editor.



“...but
if you feel
any pain,
take one or two
® 222 * tablets.”

Not every patient needs an analgesic after dental care — but some do, even though you have done everything possible to avoid any patient discomfort.

When a patient is in pain, or when there is a possibility that pain will occur later, suggest ® 222 * tablets.

222 * is a reliable analgesic — you and your patient can depend on it.

INDICATIONS: For relief of mild to moderate pain, fever and inflammation as in influenza, common cold, low back and neck pain, headache, trauma, following dental and surgical procedures.

DOSAGE: Adults — 1 or 2 tablets one to three times daily; Children's dosage, when recommended by a physician: 10 to 14 years, one tablet, one to three times daily; 5 to 10 years, one-half tablet, one to three times daily.

CONTRAINDICATIONS: Gastrointestinal ulceration and sensitivity to any of the components.

WARNINGS: Salicylates increase the effects of anticoagulants. Caution is necessary when salicylates and anticoagulants are prescribed concurrently. Also, salicylates may depress the concentration of prothrombin in the plasma. Large doses of salicylates may affect insulin requirements of diabetics. Salicylates may potentiate sulfonylurea hypoglycemic agents. Analgesic abuse (excessive and prolonged therapy) has been associated with nephropathy. TO AVOID

ACCIDENTAL POISONING ACETYSALICYLIC ACID PREPARATIONS MUST BE KEPT WELL OUT OF REACH OF CHILDREN.

PRECAUTIONS: Give with caution to patients with asthma, other allergic conditions, bleeding tendencies, or hypoprotrombinemia. Salicylates can produce changes in thyroid function tests.

Observe care in use of codeine, although tolerance and addiction are rare. Give codeine with caution to patients with severe respiratory depression. Its depressant effect may be enhanced by concurrent administration of sedatives and tranquilizers.

ADVERSE REACTIONS: *Acetylsalicylic acid:* *Gastrointestinal:* dyspepsia, heartburn, nausea, vomiting, diarrhea, gastrointestinal ulceration and bleeding. *Ear reactions:* tinnitus, hearing loss. *Hematologic:* anemia, leukopenia, thrombocytopenia, purpura. *Dermatologic and Hypersensitivity:* urticaria, angioedema, pruritus, various skin eruptions, asthma and anaphylaxis. *Miscellaneous:* mental confusion, drowsiness, sweating and thirst.

Codeine: Average or large doses may cause various gastrointestinal symptoms such as nausea, vomiting and constipation.

Caffeine: May cause nausea, nervousness, insomnia, headache, vomiting, palpitation, vertigo, muscle tremor, sensory disturbances, excessive diuresis in sensitive patients. Large doses may cause gastric ulceration.

FULL INFORMATION AVAILABLE ON REQUEST

HOW SUPPLIED

® 222 * Tablets — White, scored, engraved 222 on one side. Each tablet contains: acetylsalicylic acid 375 mg, caffeine citrate 30 mg, codeine phosphate 8 mg. Available in tubes of 12; bottles of 40 and 100; also bottles of 60 with safety cap.

*Trademark



(MC-390a)

Frosst
FOUNDED IN CANADA IN 1899
CHARLES E. FROSST & CO.
KIRKLAND (MONTREAL) CANADA

THE CANADIAN DENTAL APTITUDE TEST

Linda Teteruck, BA, MA
Administrator
Dental Aptitude Test Program

One of the many services associated with the Canadian Dental Association is the Canadian Dental Aptitude Test. As the name suggests, the Dental Aptitude Test (DAT) provides a standardized method of measuring psycho-motor skills, knowledge and personality profile of individuals seeking admission to a faculty of dentistry in Canada. The DAT is currently a requirement of admission at nine of the ten Canadian dental faculties and is recognized by American dental colleges as an alternative to the American Dental Admission Test.

The establishment of a dental aptitude testing program in Canada marked its beginnings in 1964 with an extensively researched report presented to the CDA Council on Education by Dr. R. M. Grainger and Dr. J. Flower of the Ontario College of Education. They concluded that as long as there was limited enrolment in Canadian dental schools and an excess of applicants, a process of selection and rejection was unavoidable. The report therefore recommended that to help school administrators operate the selection process in as fair and as equitable a manner as possible, a national aptitude testing program should be initiated.

With this objective in mind, Dr. Grainger and Dr. Flower consulted with the American Dental Association. Since 1950, the ADA had operated an applicant testing program that produced scores correlating positively to subsequent student performance in dental school. Based on these reports, the CDA Council on Education in 1965 recommended the immediate establishment of a testing program, and under Council direction, a Dental Aptitude Test Committee was established to implement this program. Through revenue from applicant testing fees, the testing service was organized so as to be self-supporting, and set-up costs were covered by a loan from the CDA. The first examination sessions were conducted in early 1967.

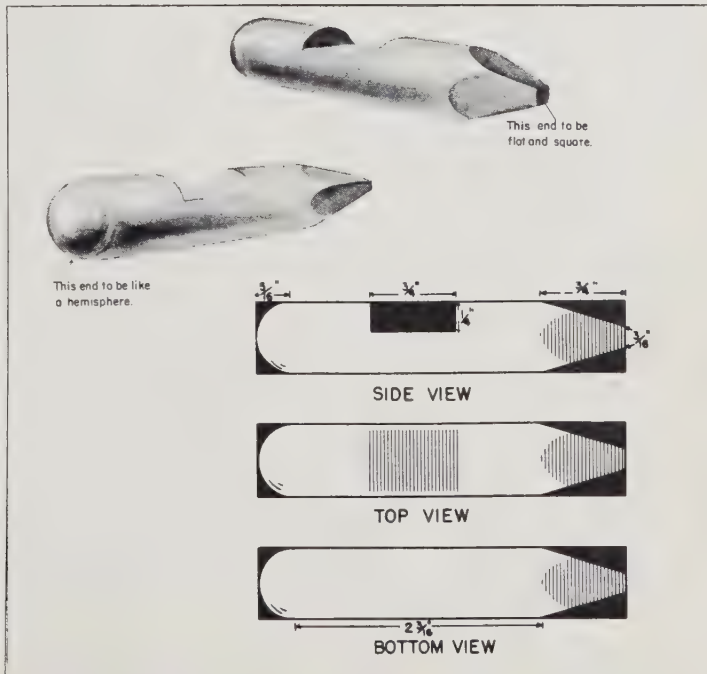
The DAT Program — then as well as now — receives the bulk of its testing materials from the ADA, which it then modifies to suit Canadian needs. These tests generally measure an applicant's abilities in two areas: academic capabilities and manual skills. Over the years, different types of tests have been used and modified both to suit the requirements of the dental faculties and as a result of re-

search undertaken by the ADA. The most recent modifications in the DAT Program occurred in January, 1975.

At present, each student who applies for the DAT exam writes five test units: reading comprehension; a survey of natural sciences (biology and inorganic chemistry); a test to measure perceptual motor ability in two dimensions (PMAT 2D); a test to measure perceptual motor ability in three dimensions (PMAT 3D); and a personality profile (French language applicants do not write a reading comprehension test unit). In addition to the written tests, each candidate is required to carve a piece of chalk.

This latter is perhaps the best-known aspect of the DAT examination. On the day of the exam, each candidate is given a special piece of green dental chalk $3\frac{1}{4}$ " in length and $\frac{5}{8}$ " in diameter, plus a knife, a ruler and a pencil. The candidate is then required, in a thirty-minute time limit, to carve the chalk according to a pattern as shown in Figure 1.

Fig 1



DENTAL APTITUDE TEST PROGRAM

OFFICIAL TEST REPORT

5	4	3	4	4
READING COMPREHENSION	BIOLOGY	INORGANIC CHEMISTRY	SCIENCE AVERAGE	ACADEMIC AVERAGE
ACADEMIC SCORES				

7	2	4	5	5
PMAT 2D	PMAT 3D	PMAT AVERAGE	CARVING DEXTERITY	MANUAL AVERAGE
MANUAL SCORES				

NON-COGNITIVE	

Mr. John Smith
301 Main Street
City, Ontario

xa

SCHOOL
CODE

0112

REFERENCE
NUMBER

52

YEAR OF
BIRTH

N76

TESTING
PERIOD

CANADIAN DENTAL ASSOCIATION

1815 ALTA VISTA DRIVE
OTTAWA, CANADA K1G 3Y6

Fig 2

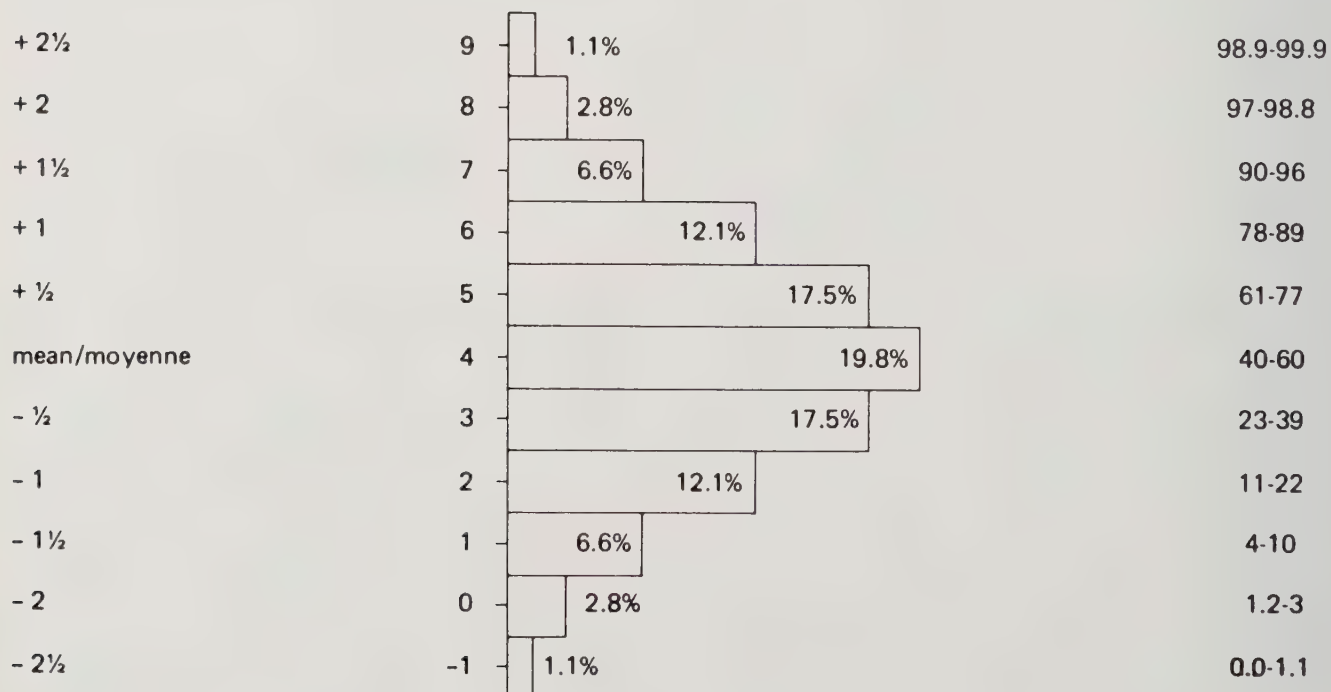
Fig 3

TABLE I / TABLEAU I

Standard Deviation /
Ecart-type

Coded Score / Valeurs du Code

Percentile Band Equivalents /
Echelle des percentiles équivalents



Several weeks after the writing of the exam, seven dental professors from various dental faculties across Canada meet to grade these DAT chalk carvings. The grading committee evaluates each chalk according to three distinct areas: the sharpness of the angles; the smoothness of the surfaces; and the overall symmetry of the carving in comparison to that of the diagram and the carving instructions. The chalk carvings are graded in committee, by teams, with each individual assigned to grade a specific number of chalks. After the initial grading has been done, all carvings awarded the same grade are arranged side-by-side so that the examiners can view these chalks in perspective, one to another. The committee then discusses those chalks which are questionable in each specific category and reassesses them if necessary.

All other portions of the DAT examination, including the two- and three-dimensional tests, are in a multiple-choice format and are computer-graded. DAT exam results including chalk-carving scores, are normalized and reported to both dental faculties and individual candidates in a standardized score format rather than by raw scores. Consequently, the performance of all applicants on all or any of the test units included in the aptitude testing program are comparable from year to year.

Figure 2 gives an example of how a hypothetical candidate's DAT grades, assessed by the DAT Program, are presented to a Canadian dental faculty, while Figure 3 shows the percentile band equivalents for each grade and the percentage of individuals falling within each range of DAT scores.

The conversion of raw scores to coded or standard scores is based on the distribution of raw scores. From a frequency distribution of raw scores the mean and standard deviation are computed and the mean or average is assigned a coded score of four. Each one-half standard deviation above or below the mean is assigned a converted score of one point above or below four. The range of student performance varies from -1 to $+9$ on coded scores and from $-2\frac{1}{2}$ to $+2\frac{1}{2}$ in standard deviation from the mean. As Figure 3 shows, a grade of 5 on the reading comprehension test unit indicates that "Mr. Smith" received the same grade as 7.5% of the candidates and scored between the 61st and 77th percentile. The grade of 5 also denotes that our candidate scored higher than 59.9% of the individuals writing this test unit.

At this time, the only test unit not graded in this fashion or distributed to the dental faculties is the personality profile. Included for research purposes by the CDA in the hope that a valid personality profile test specifically designed for dental school applicants in Canada can be developed, the results of these tests, along with studies conducted by the ADA, may yield significant results in the future.

The present DAT Committee is a relatively small body. It is through the hard work of its five members, all of whom are associated with Canadian faculties of dentistry and involved in either statistical work or dental admissions, that research into the areas of validation studies of the DAT

Program is able to proceed. At this time, Committee member Dr. G. W. Thompson, Associate Dean of the Faculty of Dentistry, University of Toronto, is studying the progress of students who took the 1975 DAT and who gained admission to Canadian faculties of dentistry and is comparing these students' DAT scores in both the academic and manual areas and relating these scores to the students' performances at dental school. This study will take five years to complete due to the necessity of observing the performance of these students from the time they took the DAT in their pre-dental year until the time they complete their four-year dental program.

Other DAT Committee members assisting are: Dr. W. R. Teteruk, U.W.O. (Chairman); Dr. E. Ambrose, McGill; Dr. M. Boyd, U.B.C.; and Dr. J. Graham, Director: Division of Educational Measurements, American Dental Association.

In its actual operation, DAT testing sessions are held twice a year in 27 different locations across Canada. On a yearly basis, the DAT Program tests approximately 1,800 to 2,000 students. Since the program's inception in 1967, over 13,000 candidates seeking admission to Canadian dental faculties have been tested under the DAT Program.

To prepare the candidate for the exam, each applicant receives a small brochure outlining the general structure of the test, as well as a few sample questions and a chalk carving illustration. If you were, once again, a prospective dental student, how would you fare on the DAT exam? Here are a few sample questions. (The answers for the multiple choice questions can be found at the end.)

SAMPLE TEST QUESTIONS

- 1 Which of the actions listed would reduce cytolysis (bursting) of Red Blood Cells in certain test solution?
 - 1) Place cells in more hypotonic solution.
 - 2) Increase the osmotic pressure of the cells.
 - 3) Add distilled water to the solution.
 - 4) Decrease the osmotic pressure of the solution.
 - 5) Add a compatible solute to the test solution.
- 2 Below are listed several structures or organic molecules. Which is (are) characteristic of all cells?
 - (a) Mitochondrion
 - (b) Plastid
 - (c) Nucleus
 - (d) Adenosine Triphosphate
 - (e) Cell Wall
 - 1) (e)
 - 2) (a), (d) and (e)
 - 3) (d)
 - 4) (c) and (d)
 - 5) (a), (c), (d) and (e)

- 3 The control that the nucleus exerts upon the cytoplasm of the cell is through
- 1) DNA carried to the cytoplasm by chromosomal secretion.
 - 2) RNA production by the ribosomes.
 - 3) sol to gel cycling of the nuclear membrane.
 - 4) ribonucleic acid serving as a template for protein synthesis in the cytoplasm.
- 4 Some animal viruses have no mechanisms of their own for entering cells. Which of the following *cellular* activities might account for viral infection.
- 1) Osmosis
 - 2) Phagocytosis
 - 3) Diffusion
 - 4) Auto-immunity
 - 5) Active transport
- 5 Which of the following characteristics of a solute would enhance its passage across a cell membrane?
- (a) Be lipid soluble
 - (b) Have positive charge
 - (c) Possess a large hydration shell
 - (d) Have a neutral charge
- 1) (a) and (b)
 - 2) (a) and (d)
 - 3) (c) and (d)
 - 4) (a) and (c)
 - 5) (b) and (c)
- 6 Digestion is perhaps most aptly defined as:
- 1) the intake of any kind of food by a living individual.
 - 2) the total physical activity of that system of organs that includes the stomach, esophagus, liver, pancreas and intestines.
 - 3) the act of eating food, including specifically chewing and swallowing.
 - 4) the chemical breakdown of large organic food molecules into smaller molecules which are soluble and diffusible.
 - 5) none of the above.
- 7 Pancreatin acts on:
- 1) Carbohydrates
 - 2) Proteins
 - 3) Fats
 - 4) All three of these
 - 5) None of these
- 8 If the cells of the mammalian intestinal mucosa were poisoned by a heavy metal such as mercury, the rate of absorption of glucose from the intestinal lumen would
- 1) increase because the inhibitory effect of cellular metabolism on absorption would cease.
 - 2) decrease because absorption depends in part on active transport.
 - 3) not be affected because glucose is too large a molecule to be absorbed in any case.
 - 4) not be affected because absorption is only due to passive diffusion.
- 9 The popularity of planaria and some hydrozoan coelenterates as subjects for research in developmental biology seems most reasonably related to
- 1) their considerable ability to regenerate.
 - 2) their modest nutritional requirements.
 - 3) their unique mode of differentiation.
 - 4) the similarity of their embryonic development to that of chordates.
 - 5) the complexity of their organization.
- 10 In the early development of an individual, which of the following is in the correct sequence?
- 1) Cleavage, fertilization, blastula, differentiation, gastrula
 - 2) Fertilization, cleavage, gastrula, blastula, differentiation
 - 3) Fertilization, cleavage, blastula, gastrula, differentiation
 - 4) Blastula, cleavage, gastrula, fertilization, differentiation
 - 5) None of the above
- 11 Red blood cells placed in a concentrated saline solution will undergo which one of the following changes as a consequence of the osmotic pressure developed?
- 1) Shrink
 - 2) Inflate
 - 3) Burst
 - 4) Absorb water from the solution
 - 5) Divide
- 12 What is the oxidation number of iodine in the $(\text{H}_3\text{IO}_6)^{2-}$ ion?
- 1) -1
 - 2) +7
 - 3) +9
 - 4) +11
- 13 Balance the following equation:
- $$\text{Cr}_2\text{O}_7^{2-} + \text{H}_2\text{AsO}_3^- + \text{H}^+ \rightarrow \text{Cr}^{3+} + \text{H}_2\text{AsO}_4^- + \text{H}_2\text{O}$$
- What is the coefficient of H_2O in the balanced equation?
- 1) One
 - 2) Four
 - 3) Five
 - 4) Seven

14 Which one of the following atoms has the largest number of unpaired electrons in the free state? (atomic numbers: Na = 11; Al = 13; Si = 14; Cl = 17)

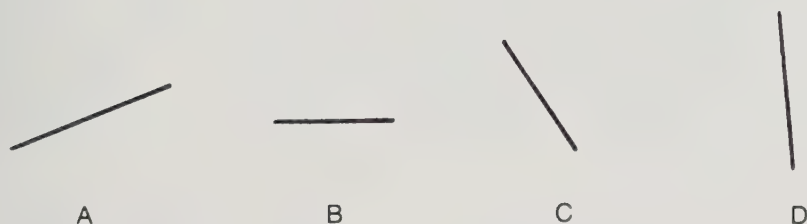
- 1) Na
- 2) Al
- 3) Si
- 4) Cl

15 Each electron may be described by a set of four quantum numbers (n, l, m, s). What is the maximum number of electrons that may be present in the n = 4 level?

- 1) 8 electrons
- 2) 18 electrons
- 3) 24 electrons
- 4) 32 electrons

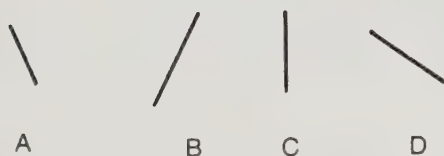
For each of the following four questions, rank the lines in terms of length from SHORT TO LONG, and choose the alternative that has the correct ranking.

16.



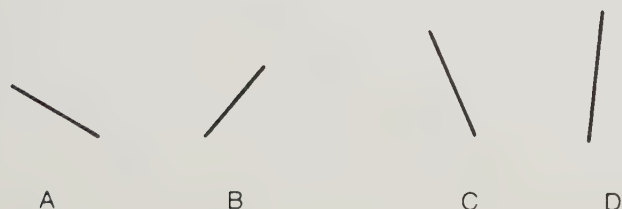
- (1.) B - C - A - D
- (2.) B - C - D - A
- (3.) B - A - D - C
- (4.) B - D - C - A

17.



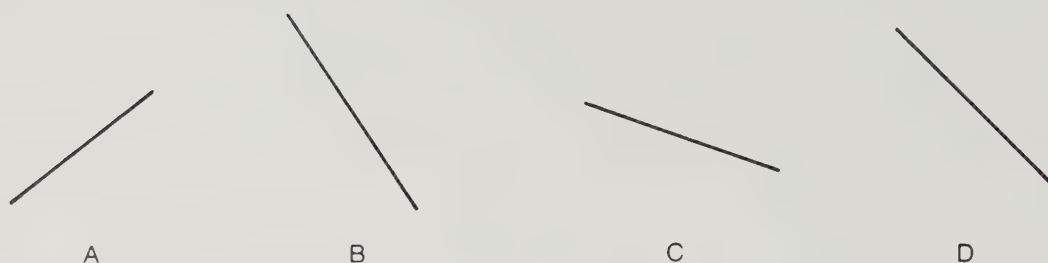
- (1.) A - C - B - D
- (2.) C - A - D - B
- (3.) D - A - C - B
- (4.) A - C - D - B

18.



- (1.) A - B - C - D
- (2.) B - A - D - C
- (3.) B - A - C - D
- (4.) C - B - A - D

19.



- (1.) A - C - B - D
- (2.) C - A - B - D
- (3.) C - A - D - B
- (4.) A - C - D - B

For the following *two* questions, examine the figures closely and then determine HOW MANY CUBES have:

PROBLEM A

In Figure A how many cubes have

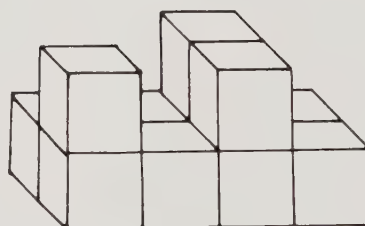


FIGURE A

- 20. one of their exposed sides painted?
- 21. two of their exposed sides painted?
- 22. three of their exposed sides painted?
- 23. four of their exposed sides painted?
- 24. five of their exposed sides painted?

PROBLEM B

In Figure B how many cubes have

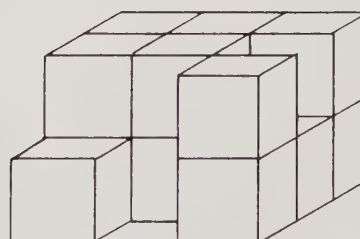
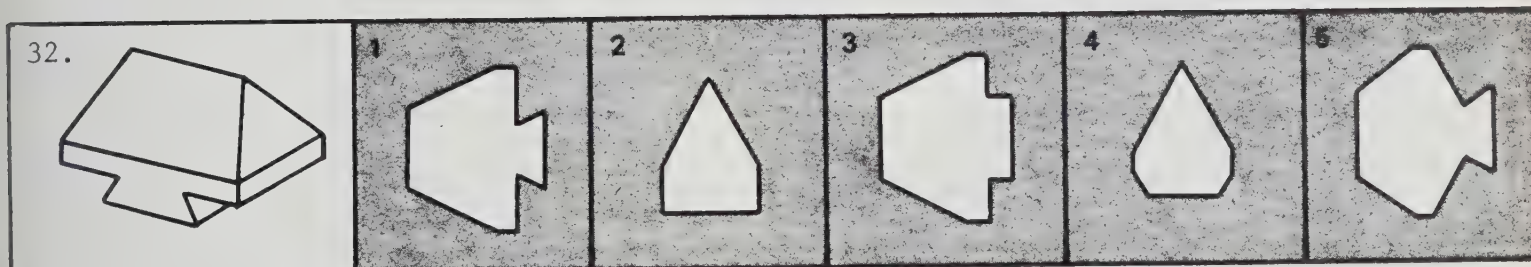
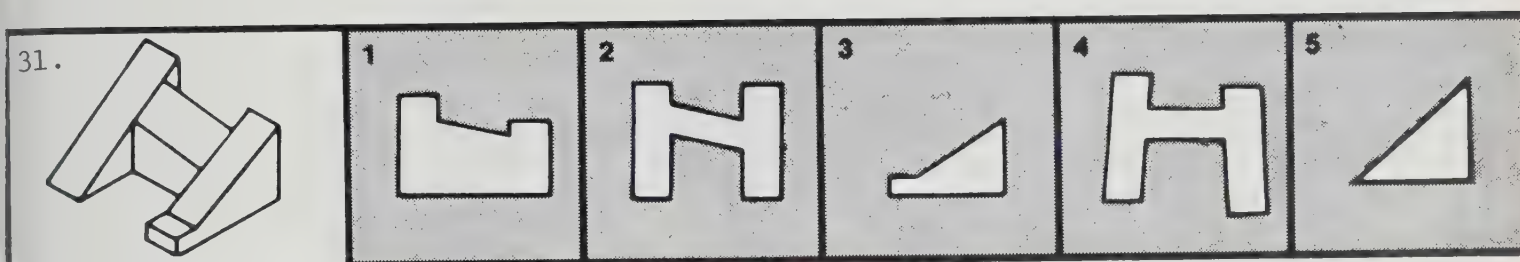
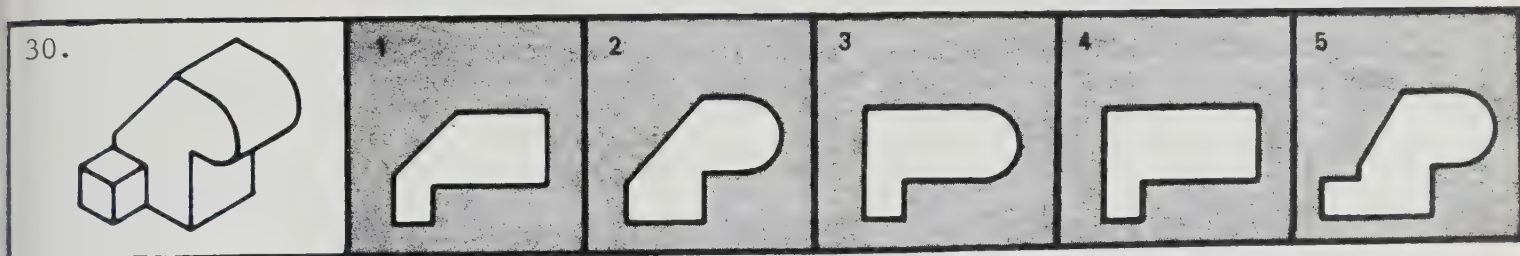


FIGURE B

- 25. one of their exposed sides painted?
- 26. two of their exposed sides painted?
- 27. three of their exposed sides painted?
- 28. four of their exposed sides painted?
- 29. five of their exposed sides painted?

For each of the following *three* questions, a three-dimensional object is shown at the left followed by outlines of five apertures or openings. Pick from the five apertures outlined, the opening through which the object would pass.



ANSWERS TO SAMPLE TEST QUESTIONS:

1. 5	5. 2	9. 1	13. 2	17. 4	21. 3	25. 3	29. 1
2. 3	6. 4	10. 3	14. 3	18. 3	22. 3	26. 4	30. 4
3. 4	7. 4	11. 1	15. 4	19. 4	23. 2	27. 4	31. 1
4. 2	8. 2	12. 2	16. 2	20. 2	24. 1	28. 2	32. 2

SIEMENS

What do dentists tell dentists about their Siemens X-ray equipment?

One of the nicest things about making a discovery is the opportunity it provides for sharing your find with a colleague. Which is one reason you find so many Siemens owners talking about the unmatched versatility, precision, and long-term investment value of their Siemens X-ray equipment.

Orthopantomograph™, for example, performs more diagnostic procedures than competitive models. And it accommodates patients of any size – standing, seated or even in a wheel chair or prone on a stretcher – without special adaptations. For all their versatility, Orthopantomograph systems take up significantly less space

than comparable units. And they're easier to install.

The Orthoceph™ Panoramic Cephalometric unit offers lateral skull studies and panoramic films in one easy-to-use unit.

For complete information on the full range of Siemens products for dentists – including Heliodont intraoral X-ray units with automatic dosage control and easy-to-use film processors that handle film sizes up to 8" x 10" – see your full service dental dealer.

Siemens Electric Limited
Medical Systems
PO Box 7300, Pointe Claire
Québec H9R 4R6
Tel: (514) 695-7300
Telex: 05-822778



IS DRY SOCKET PREVENTABLE?

J. Rozanis, MSc, PhD

I. D. F. Schofield, DDS, FRCD(C)

B. A. Warren, MB, BS, BSc(Med), FRCPA, MRC(Path)
London, Ont.

Dry socket develops in mandibular third molar odontectomies in 20-30 per cent of the cases and in 2.0-4.4 per cent of all extractions of permanent teeth. This complication is an extremely painful one. The cost to the community is high in terms of time lost and professional care required. The etiology is a fault in the healing process resulting in early disintegration of the post extraction clot. Malfunction of the fibrinolytic system in this context appears important in the initiating process. This in turn may be associated with specific types of bacterial flora in the region. These are promising leads which may clarify the specific causes of dry socket.

The incidence and cost of the disorder

“Dry socket” is a faulty healing condition which arises as a complication of tooth extraction, and the incidence in Ontario is not significantly different from that described in the literature for North America. Clinical investigations have shown that dry socket develops in 2.0-4.4% of all extractions of permanent teeth,¹⁻⁴ although in certain extractions the rate is much higher. For example, 20-30 per cent of the cases of mandibular third molar odontectomies show dry socket^{2,4} when the patients are aged between 20 and 40.

Recognition of the disorder as a consistent problem for patients and practitioners has resulted in incorporation of payments for it in the ODA fee schedule. The ODA fee schedule (Codes 79601-79604) has items relating to post-surgical visits at \$7.00 per visit over and above the surgical fee.

The condition is extremely painful, and any measures which reduce its incidence or point out ways of improving therapy would reduce the amount of pain that individuals would experience following tooth extraction. There would be a reduced need for immediate postsurgical dental care if healing was not complicated by dry socket formation. In terms of absolute numbers instead of percentage figures, the saving to the community, if this postsurgical complication

was ameliorated or removed, would be considerable. The disorder affects men and women during their productive years as members of the work force. If the problem were reduced, there would be an overall saving of man-hours of work to the community. Apart from these considerations, the complication imposes a direct economic burden. The approximate figures which follow give a measure of the cost of this complication in Ontario. These figures are based on one of the author's private practice of one day per week, projected into the dental Manpower of Ontario. Using approximately 65 full-time oral surgeons and 70 per cent of the general practitioners (2,520) who do surgery, we arrived at a conservative projected cost for treatment of “dry sockets” using the average figures quoted from the literature. The approximate cost to the patients of Ontario is five million dollars.

Etiology of dry socket

Definition

Dry socket is a faulty healing condition which arises as a complication of tooth extraction. It is characterized by disintegration of the normal blood coagulum within the post extraction alveolar socket and is associated with intense continuous irradiating pain, putrid odour and general malaise.⁵

General description

The duration of the condition may vary to some degree, depending on the severity of the case. It usually occurs within the period from the third day to the fourteenth day after extraction. Many synonyms have been used for dry socket, and these indicate attributions to various etiologies. Examples of various synonyms are: alveolar osteitis,⁶ localized osteomyelitis,⁷ necrotic alveolar socket,⁶ alveolitis sicca dolorosa⁸ and fibrinolytic alveolitis.⁹

The etiology and pathogenesis of this painful condition are obscure. It is basically a fault in the healing process, and there have been many different causes suggested for the

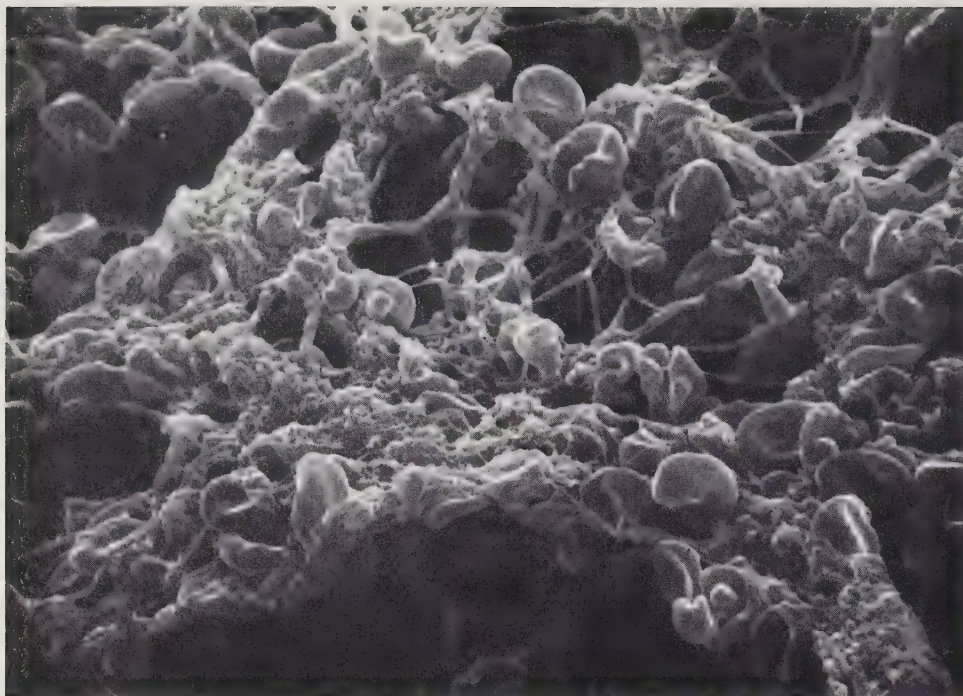


Fig 1 Scanning electron micrograph of the coagulum which forms after odontectomy in man. The clot is seen to be composed of interlocking strands of fibrin in which are enmeshed red blood cells. x 1750.

condition. The main theories of causation emphasize the following influences:

- (a) Local factors such as trauma to the alveolar bone during surgery,⁹ alteration in local circulation,¹ the use of local anaesthetics with vasoconstrictors.¹⁰
- (b) Infection: various bacterial infections,^{5,10-12} and pericoronitis.¹³
- (c) Enzyme changes: fibrinolytic or proteolytic,⁹ saliva activators or proactivators or plasminogen.¹⁴
- (d) General factors: stress,¹⁵ and the age and sex of the patient.¹¹

The central role of the disintegration of the blood clot in the etiology of dry socket

The appearance on scanning electron microscopy of the clot that forms after odontectomy in the tooth socket is shown in Fig. 1. The current hypothesis for the etiology of the condition is that abnormal fibrinolytic activity, released in peculiar, as yet not clearly defined ways, releases tissue activators which convert plasminogen to plasmin. Plasminogen is laid down in the fibrin network as it is formed. Its conversion to the active enzyme plasmin results in the break up of the clot by disintegrating the fibrin. The origin of this lytic activity is suggested to be due to trauma to the alveolar bone during operation and/or pre-existing inflammation. Disintegration of the coagulum disrupts the normal stages of healing and repair of the disrupted tissue and a dry socket results.

The fibrinolytic system and its inhibitors in the context of the problem of dry socket

Numerous investigations^{9,14,16} in recent years have shown that activators and proactivators for plasminogen

occur in various tissues and body fluids. Human saliva contains activators and proactivators^{17,18} which may disturb and interrupt intra-oral wound healing, and are characterized by either a premature loss of the clot, which was going to organize, or by secondary haemorrhage.¹⁹ The proactivator arises mainly from salivary glands, and the activator probably arises mainly from oral organisms and various cells of the oral cavity.

Inflamed tissue shows a particularly high fibrinolytic activity.⁹ A number of varieties of bacteria also possess fibrinolytic activity^{9,20} although some of these organisms display this only in the presence of human proactivators.²¹ It is possible that contamination with fibrinolytically active bacteria, originating in saliva and/or in soft tissue adjacent to the socket could influence in this way the disintegration of the clot. This would be particularly liable to occur if pericoronitis preceded odontectomy. During and immediately after surgery many bacterial cells spill into the fresh socket. Some find their way into the blood stream producing bacteremia, and others are perhaps entrapped in the coagulum in formation. It has been shown that cauterization of the gingival crevice around isolated teeth dramatically reduces the number of bacteria which spill into the fresh socket.^{22,23}

Bacteria in healthy gingival sulcus is the most significant source of bacteremia. Mechanical cleansing with saline rinses reduces the incidence by 29.5 per cent, and disinfectant washing reduces the incidence by 72.7 per cent.²⁴ The number of bacteria in the wound as well as in the saliva has been found to be significantly higher in patients who developed dry socket.¹² Emigration of leucocytes into the inflammatory focus may be involved in the process since it has been shown that human leucocytes become fibrinolytically active when acted on by endotoxins.²⁵ Leucocytes occur abundantly in the osteomyelitis which is one of the features associated with dry socket.²⁶

Pain in the condition of dry socket

There is a violent neuralgic form of pain in dry socket which is a constant accompaniment of this condition. The suggested explanation of this pain is that there is a generation of Kinins from inactive precursors known as Kininogens. Kinins are potent chemical mediators of inflammation and act on chemoreceptors around the vessels.²⁷ Circumstantial evidence has been reported to indicate that the concentration of Kinins in the alveolus of dry sockets probably accounts for the severe pain encountered in this condition.²⁸

Current treatment of dry socket

Treatment of dry sockets since Colyer²⁹ has remained primarily preventive and palliative and has reflected the level of understanding of the clinical condition, etiology and the treatment concepts of the time. Colyer suggested an etiology of "dirty forceps." Jamieson³⁰ advocated the wiping of instruments with phenol as an antiseptic measure. General preventive therapy has consisted of good surgical principles, proper supportive care for the patient and control of systemic diseases.³¹

Ward³² described the changes brought about by application of theories of antiseptics and asepsis in dental practice in the first three decades of our century. However, convincing records to support the reduction of dry socket incidence are not available.³³ With the introduction of chemotherapy and antibiotics, a wide variety of drugs, both local and systemic, were used. The local use of sterile petrolatum,³⁴ irrigation with sodium perborate,³⁵ potassium bismuth tartrate³⁶ and odoglycerol,³⁷ prontosil,³⁴ sulfas,³⁸ crystalline penicillin,³⁴ tetracycline,³⁹ chlortetracycline hydrochloride,⁴⁰ erythromycin,⁴¹ lincomycin in gelfoam,⁴² and bacitracin-neomycin⁴³ cones were reported with some claims of reduction in the incidence of dry socket. Local lavage was tried successfully, by pulsating copious amounts of sodium chloride into the surgical site and at debridement.⁴⁴

Systemic administration of antibiotics⁴⁵ as a routine prophylactic measure was supported by several authors, based mainly on their personal clinical experience. However, others rejected routine antibiotics prophylaxis due to the potentially harmful effects and because scientific evidence does not support their use in this regard. In a recent study⁴⁵ it was concluded that the use of prophylactic antibiotics in third molar surgery is unnecessary unless specific systemic factors are present.

The following wide range of anti-inflammatory drugs has been generally and locally administered to reduce the post-operative symptoms: gluco-corticosteroids⁴⁶ pyrazolone derivatives⁴⁷ and antihistamines.⁴⁸ However, the use of corticosteroids,⁴⁹ especially the more potent compounds (i.e. betamethasone) can depress the hypothalamo-pituitary-adrenal axis. The topical application of antihistamines⁵⁰ is contraindicated because they may act as haptens and probably conjugate with some tissue protein.

Other preventive and palliative methods include the ad-

ministration of vitamins B,⁵⁰ C,⁵¹ D⁵¹ and calcium to undernourished patients. A claim of completely prevented dry socket, following administration of 50 mg of thiamine chloride⁵² intravenously, is on record. Another method is the use of hydrogen peroxide and saline to remove debris followed by gentle removal of the necrotic clot from the crypt and loosely placing a dressing of iodoform gauze saturated with one of the following pastes:

- (a) An antibiotic (polymixin B sulfate or bacitracin) and zinc oxide ointment.⁵³
- (b) Palliative medication (eugenol, resin and zinc oxide).
- (c) Wards surgical cement or Wondrpak.
- (d) Merthiolate and crushed aspirin^{54,55} in thymol powder and benzocaine crystals.^{54,55}
- (e) One per cent iodine and guaiacol solution.⁵⁶
- (f) Phenol camphor solution.

Other authors⁵⁷⁻⁵⁹ have used proteolytic enzymes to reduce the duration of a dry socket; trypsin to hydrolyze necrotic tissue and perhaps speed recovery.

The use of Apérynl⁶⁰ (an alveolar cone) containing 32 mg acetylsalicylic acid, and 3 mg propyl-hydroxy-benzoate was reported to be used successfully due to its inhibitory effects on the fibrinolytic activity (plasmin and activator activity) and its analgesia effects.⁶¹

Recently, the antifibrinolytic and prophylactic effects of PEPH (propyl ester of p-hydroxybenzoic acid) were used in a double blind investigation. The results were found to be promising.

Conclusion

Current theories of the etiology of dry socket following tooth extraction indicate that it is most particularly related to the fibrinolytic system. However, there are many questions unanswered at present. Is the coagulum in the dry socket structurally different? Is it poorly developed from the point of view of size and fibrin strand density of the network? Are the amounts of active fibrinolytic agents too great or too little within the coagulum for normal healing? Are there entrapped bacteria or their products within the coagulum? What specifically are these substances within the coagulum? In their amount and nature, do they determine the occurrence or absence of dry socket?

★ Our conclusion from a review of the literature is that there are promising leads now available as to the nature of the etiology of dry socket centred particularly around malfunction of the fibrinolytic system in the healing tooth socket. If the etiology can be more fully elucidated then appropriate measures can be incorporated into clinical practice to reduce or eliminate the occurrence of this condition.

This investigation was supported by Provincial Health Research Grant No. PR86.

Dr. Rozanis is associate professor in the Department of Bacteriology and Immunology, University of Western Ontario, London, Ont.

Dr. Schofield is an associate professor in the Department of Oral Surgery, University of Western Ontario.

Dr. Warren is a professor in the Department of Pathology, University of Western Ontario.

- 1 Lehner, T. Analysis of one hundred cases of dry socket. *Dent Pract* 8:275, 1958.
- 2 Adkisson, S. R. and Harris, P. F. A statistical study of alveolar osteitis. *U.S. Armed Forces Med J* 7:1749, 1956.
- 3 Hansen, E. H. Alveolitis Sicca Dolorosa (dry socket): frequency of occurrence and treatment with trypsin. *J Oral Surg* 18:409, 1960.
- 4 Krough, H. W. Incidence of dry socket. *J Amer Dent Ass* 24:1829, 1937.
- 5 Archer, W. H. Oral maxillofacial surgery. Ed 5. Philadelphia, London and Toronto, W. B. Saunders, 1975.
- 6 Failo, P. S. Proteolytic enzyme treatment for the necrotic alveolar socket (dry socket). *Oral Surg* 1:608, 1948.
- 7 Podulin, H. The etiology, prediction and treatment of dry socket. *Dent Cosmos* 78:1038, 1936.
- 8 Birn, H. Fibrinolytic activity of alveolar bone in "dry socket". *Acta Odont Scand* 30:23, 1972.
- 9 Idem. Etiology and pathogenesis of fibrinolytic alveolitis ("dry socket"). *Int J Oral Surg* 2:211, 1973.
- 10 Deutsch, E. and Elsner, P. The mechanisms of fibrinolysis induced by bacterial pyrogens. *Thromb et Diathesis Haem* 3:286, 1959.
- 11 MacGregor, A. J. Etiology of dry socket: a clinical investigation. *Brit J Oral Surg* 6:48, 1968.
- 12 Brown, L. R., Merrill, S. S. and Allen, R. E. Microbiologic study of intraoral wounds. *J Oral Surg* 28:89, 1970.
- 13 Kaye, L. W. Investigations into the nature of pericoronitis II. *Brit J Oral Surg* 4:52, 1966.
- 14 Schulte, W. and Worner, H. Speichelinflüsse aus die Blutgerinnung bei hamorrhagischen Diathesentrom belastographische Untersuchungen. *Dtsch Zahnarztl Z* 23:1, 1960.
- 15 Gabler, W. L., Tarbet, J. T., Foschik, L. S. and Frederick, E. G. The effects of stress, streptokinase and iodine on the plasmin-system as determined by clot lysis. *J Dent Med* 19:3, 1964.
- 16 Amler, M. A. Pathogenesis of disturbed extraction wounds. *J Oral Surg* 31:666, 1973.
- 17 Albrechtsen, O. K. and Thaysen, J. H. Fibrinolytic activity in human saliva. *Acta Physiolog Scand* 35:138, 1955.
- 18 Schulte, W. and Vorbauer, J. Fibrinolytische effekte beim Kontakt von Speichel und Blut. *Dtsch Zahn-Mund-und Kieferheilk* 44:23, 1965.
- 19 Schulte, W. Saliva and blood coagulation. Transactions of the Third International Conference on Oral Surgery, 494, 1968.
- 20 Schulte, W. and Ullmann, U. Bakterieneneinflüsse auf das Blutgerinnsel ein neues Nachweisverfahren, 1970.
- 21 Birn, N. Bacteria and fibrinolytic activity in "dry socket". *Acta Odont Scand* 28:773, 1970.
- 22 Pressman, R. S. Transitory bacteremias associated with dental operative procedures and their prophylactic treatment. *Dent Clin N Amer* 35:1, 1958.
- 23 Fish, W. Bone infection. *J Amer Dent Ass* 26:691, 1939.
- 24 Jones, J. C. Control of bacteremias associated with the extraction of teeth. *Oral Surg* 30:454, 1970.
- 25 Goldstein, I. M., Wunschmann, B., Astrup, T. and Hederson, E. S. Effects of bacterial endotoxin on the fibrinolytic activity of normal human leucocytes. *Blood* 37:447, 1971.
- 26 Amler, M. H. Pathogenesis of disturbed extraction wounds. *J Oral Surg* 31:666, 1973.
- 27 Lim, R. K. S. Pain mechanisms. *Anaesthesiology* 28:106, 1967.
- 28 Birn, H. Kinins and pain in "dry socket". *Int J Oral Surg* 1:34, 1972.
- 29 Colyer, J. F. Extraction of teeth. London, Ash, 1896.
- 30 Jamieson, T. N. Successful treatment of dry socket. *Items of Interest*, New York 19:867, 1897.
- 31 Manual of preoperative and postoperative care. American College of Surgeons. Ed. 2. Philadelphia, W. B. Saunders Co., 1971.
- 32 Ward, A. Post operative complications in exodontia: their treatment and prevention. *Dent Cosmos* 74:72, 1932.
- 33 MacGregor, A. J. The bacteriology of dry socket: the effect of zinc oxide and oil of cloves. *Oral Surgery: Trans. 3rd Conference on Oral Surgery*, New York. E & S Livingstone, 1968.
- 34 Millhon, J. A., Austin, L. T., Stofne, E. C. and Gardner, B. S. An evaluation of the sulphadiazine and other dressings in dry socket in lower third molars. *J Amer Dent Ass* 30:1839, 1943.
- 35 Sehroff, J. and Bartels, H. A. Painful sockets after extraction. *J. Dent Res* 9:81, 1929.
- 36 Belding, P. H. et al. Post extraction infection: Preliminary report on the oral flora. *J Amer Dent Ass* 21:1222, 1934.
- 37 Harang, H. L. The prevention of dry sockets in the extraction of teeth. *Oral Surg* 1:601, 1948.
- 38 Johansen, J. R. and Gilhuus-Moe, O. Repair of the post-extraction alveolus in the guinea pig. A histological and autoradiographic study. *Acta Odont Scand* 27:249, 1969.
- 39 Quinley, J. F. Dry socket after mandibular odontectomy and use of soluble tetracycline hydrochloride. *Oral Surg* 13:38, 1960.
- 40 Vertic, R. L. Local implantation of aureomycin in extraction wounds. A preliminary study. *J. Amer Dent Ass* 46:160, 1953.
- 41 Mourfield, W. R. et al. Clinical evaluation of erythromycin dental cones in oral surgery. *Oral Surg* 11:584, 1958.
- 42 Goldman, D. R. et al. Prevention of dry socket by local application of lincomycin in gelfoam. *Oral Surg* 35:472, 1973.
- 43 Nordenram, A. et al. Bacitracin-neomycin in impacted mandibular third molar sockets. *Int J Oral Surg* 2:279, 1973.
- 44 Sweet, J. B. et al. Effects of lavage technique with third molar surgery. *Oral Surg* 41:152, 1976.
- 45 Curran, J. B. et al. An assessment of the use of prophylactic antibiotics in third molar surgery. *Int J Oral Surg* 3:1, 1974.
- 46 Mead, S. V., Lynch, D. F., Mead, S. G. and Wolkowicz, J. Triamcicolone given orally to control postoperative reactions to oral surgery. *J Oral Surgery* 22:482, 1964.
- 47 Husted, E. and Hjorting-Hansen, E. The effect of G-27202 (Tanderil-Geigy) on postoperative discomfort following removal of the lower third molar. *Acta Odont Scand* 20:205, 1962.
- 48 Cranin, A. N. and Cranin, S. L. A study of the effect of an antihistamine on oral surgical postoperative sequela. *Oral Surg* 18:432, 1964.
- 49 Walton, J. G. and Thompson, J. W. Pharmacology for the dental practitioner. British Dental Association, London, 1971.
- 50 Shea, W. E. Treatment of dry socket: a preliminary report. *J Amer Dent Ass* 27:1482, 1940.
- 51 Molt, F. F. Diet as a factor in healing. *J Amer Dent Ass* 23:1442, 1936.
- 52 Whitfield, A. J. Use of thiamine chloride in prevention of pain from dry socket. *J Amer Dent Ass* 28:450, 1941.
- 53 Waite, D. E. Textbook of practical oral surgery. Philadelphia, Lea & Febiger, 1972.
- 54 Kruger, G. O. Textbook of oral surgery. Ed 4. Saint Louis, Mosby, 1974.
- 55 Idem. Textbook of oral surgery. Ed. 1. Saint Louis, Mosby, 1959.
- 56 Waite, D. E., Erikson, R. L. and Wilkinson, R. H. Study of dry sockets. *Oral Surg* 13:1046, 1960.
- 57 Gustarson, G. and Wallenicus, K. Effect of local application of Trypsin in post-extraction alveolar osteitis. *Oral Surg* 14:280, 1961.
- 58 Soested, O. Treatment of dry sockets with Trypsin. *Odont Tidskr* 65:545, 1957.
- 59 Anderson, M. F. Report on the use of crystalline Trypsin in treatment of localized osteitis. *Oral Surg* 10:1166, 1957.
- 60 Birn, H. Antifibrinolytic effect of Aperylin in "dry socket". *Int J Oral Surg* 1:190, 1972.
- 61 Ritzau, M. and Swangsilpa, K. The prophylactic use of propyl ester of P-hydroxybenzoic acid on alveolitis sicca dolorosa. Personal communication. *Oral Surg*. In press.

ef Educational Film Library

16MM COLOR SOUND FILMS

Clinical and Laboratory Procedures for the Many Uses of Self Threaded Pins and Related Armamentaria — Aprox. 25 Minutes. Available on loan

PIN PANORAMA I

"T.M.S."

Incisal and Class V Restorations, pin supported amalgam and resin foundation, cross pinning, and venting
Research data and histology references

PIN PANORAMA II

"V.S.M.S."

Vertical Nonparallel pins combined with Paramax Instrument Paralleled Vertical Pins, splinting and replacing missing teeth. (Recipient First Prize Gold Medal Award, Stockholm, Sweden.)

PIN PANORAMA III

"S.M.S."

The Nonparallel Horizontal Splinting System, incorporates the replacement of anterior missing teeth, combined with features to co-splint to existing restorations



designers and manufacturers of products for finer dentistry

236 fifth avenue, new york, new york 10001



WHALEDENT International
Division of IPCO Hospital Supply Corp.

New Products



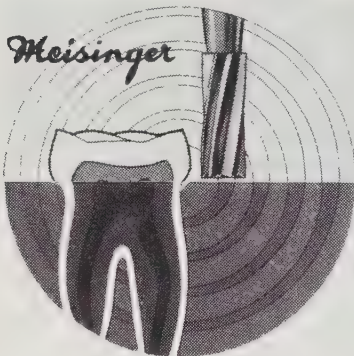
X-RAY PROCESSING CHART

TEMPERATURE	64°	68°	72°	76°	80°	84°	88°	92°	Fo
DEVELO	30	23	16	12	9	8	6	4	SEC.
FIX	60	45	30	25	20	20	20	20	SEC.

INSTA MINI-TANX

A compact, spill-proof container for Insta-Neg developer, Insta-Fixer and rinse jar for use in the darkroom. Needs no installation or electrics and the mini-tank cover provides an air-tight seal for developer and fixer jars automatically ... thus reduces oxidation and maximizes solution-life. All parts are resistant to X-ray chemicals

Insta-Neg-Insta-Fix solutions are ideal for processing of endo, emergency and surgical X-rays in seconds. (see chart above). Solutions available in gallons and quarts. Sample kit shipped with MINI-TANX order from WEIL



PEDO CARBIDES for MID-WEST NOW IN STOCK

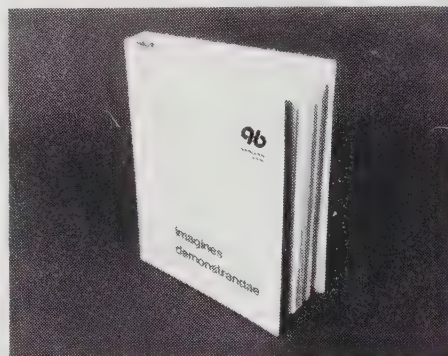
A full selection of 22 shapes with a 1.07 mm FG shank for use in the Mid-West Pedo handpiece. We have in stock, styles No. 1/2, 1, 2, 33 1/2, 34, 35, 37, 556, 557, 558, 56, 57, 58, 699, 700, 701, 169, 170, 171, 57R, 1557 & 330. Supplied in packages of 6 of one design at an excellent price ... from WEIL

WORLD FAMOUS PATIENT ATLAS

'IMAGINES DEMONSTRANDAE' by Walter Drum, Dr. med, dent. It is obvious that pictures make relationships clear more quickly for a patient than do words alone. That is the secret of success of the most widely used patient demonstration atlas in the world, 'IMAGINES DEMONSTRANDAE'.

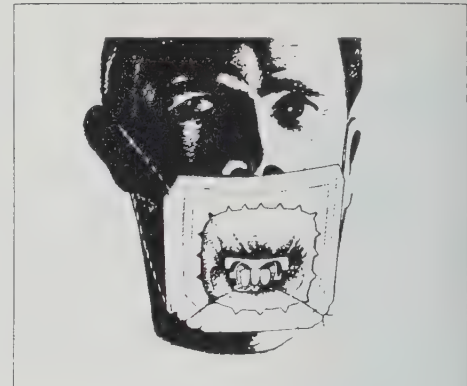
More than 30,000 dentists the world over already use this atlas, thereby saving themselves time and money. A picture may save a thousand words. Eighty large colour plates 24.5 cm x 32.5 cm (approx. 9.6" x 12.8"), mounted on stiff cardboard covered with a resistant clear plastic, have been carefully selected to provide the doctor with a means for quick and impressive demonstration. The 239 full-colour illustrations are bound in a white padded vinyl cover with a patented easy to use mechanism for removal of single pages.

Available from WEIL



NEW SUPERFLEXIBLE DIAMOND DISKS

Especially suitable for separating and carving interproximal areas, for gold work and porcelain/metal bonding. These disks consist of super solid, yet flexible stainless steel of only 0.05 mm. Including the diamond coating the maximum thickness is 0.10 mm for single-sided or 0.15 mm for double-sided disks. Jamming of the disks is not likely since the diamonds also cover the edges. Available from WEIL



NEW RUBBER DAM ELIMINATES FRAME

This disposable rubber dam eliminates the need for cutting, fitting and individual adjustment. It is of one-piece construction with built-in elastic bands that fit comfortably around the patient's ears and eliminates need for a rubber-dam frame. A specially processed soft paper lining minimizes patient's contact with the rubber. Comes in packages of 25 ... from WEIL



'SILVER STAR' Micro-grain SILVER ALLOY

This is a most economical 70% silver alloy, with zinc or non-zinc ... low expansion ratio of only 2-5 microns and low flow of 1.0 to 1.5%, plus high compressive strength. SILVER STAR alloy polishes to a brilliant lustre which resists discoloration. Available in .3 grain pellets, package of 500, or filings in 5 oz. bottle, from WEIL



DENTAL SUPPLIES LIMITED

Visit us at the: Ontario Dental Convention May 8 to 11
Journées Dentaire du Québec May 18 to 20

18 Grenville Street, Toronto, Ont. M4Y 1A4 (416) 925-5164

PULPAL RESPONSE TO CAVITY TREATMENT WITH MICROBICIDAL SOLUTION AND SILICATE RESTORATIONS IN MONKEYS

G. S. Beagrie, DDS(Edin), FDS RCS(Edin), FRCD(C)
Toronto

Martin Brännström, Odont Dr
Stockholm, Sweden

Cavity toilet, one of G. V. Black's principles of cavity preparation, is shown to have an influence on the pulpal reaction of teeth restored with silicate cement. A germicidal solution to clean the cavity after preparation is thus advocated prior to the placement of a restoration or lining.

Much biological research into the usage of silicate cement as a restorative material has been conducted over the years.¹⁻⁵ These workers have claimed that silicate cement used without a lining causes pulpal inflammation, ranging from displacement of odontoblasts to acute inflammation with abscess formation and necrosis. It is said that the low pH values of the cement induce this harmful effect.²⁻¹² Another theory has been suggested to the above, namely, that silicon compounds from the cement in contact with tissues may result in an antigen-antibody reaction.¹³ In recent years, however, a further hypothesis has been proposed to explain the pulp reaction to unlined silicates.^{14,15} These workers claimed that the cause was bacterial in origin and that such bacteria had a twofold source. Either they were left in the base of the cavity or, by diffusion, gained access to the cavity wall and floor. Such marginal percolation in relation to silicate and other materials has been well documented.¹⁶

In an attempt to answer further the challenges raised in the penultimate experiments, the following study was designed. In this, both the sealing qualities of silicate and the cleaning and germicidal properties of a microbicidal fluoride* solution were assessed.

Materials and method

The experimental animal was an adult cynomologous monkey approximately four years old. The animal was sedated with an intramuscular injection of 0.6 ml

"Sernylan"† and 0.3 ml of 6 per cent aqueous solution atropine sulphate. This was followed by 0.5 ml 60 per cent aqueous solution of pentobarbital sodium given intraperitoneally. To control pain, local anaesthetic was administered as a mandibular block or by infiltration to the jaws.

Thirty-two teeth were used in the experiment, and deep cavities were cut in the buccal surfaces with a 34 bur in an air-rotor handpiece. Cutting was carried out under a water spray. On completion of cutting, each quadrant was isolated and cavities treated according to a rigid protocol. Treatment of the quadrant was according to lot to avoid bias. Management was as follows:

1. Right maxillary quadrant cavities were cleaned with a water spray, dried with an air syringe for five seconds, and filled with silicate;‡
2. Left mandibular cavities were treated in the same way.

In the remaining two quadrants, treatment of each tooth consisted of cleaning the cavity and surroundings with microbicidal cavity cleanser in a pledget of cotton for one minute. After this the cavity was dried with a jet of air for five seconds and filled with silicate. After setting, a layer of silicate filling material was cut out slightly inside the enamel dentine border with the air-rotor 34 bur and water spray. The cavity was then cleaned with water, air dried for five seconds and filled with zinc oxide eugenol cement.

Thereafter the enamel around the area of the cavity was etched with 35 per cent phosphoric acid for 30 seconds and sealed with composit resin.§ The experimental cavities were thus filled as illustrated in Fig 1.

The animal was sacrificed after three weeks, the teeth were extracted, apices removed and fixed in neutral buffered formalin. After coding and decalcification, paraffin sections were cut at 6 microns and stained alternately with

*Tubulicid Red — Dental Therapeutics AB, Ektorp, Sweden

†"Sernylan" — Biocutic Laboratories — St. Joseph, Missouri, USA.

‡"Silicap" — Ivoclar AG/Etabl Vivadent, Fl. Schaan 9494, Liechtenstein

§"Concise" — 3M Center, St. Paul, Minnesota, 55101 USA

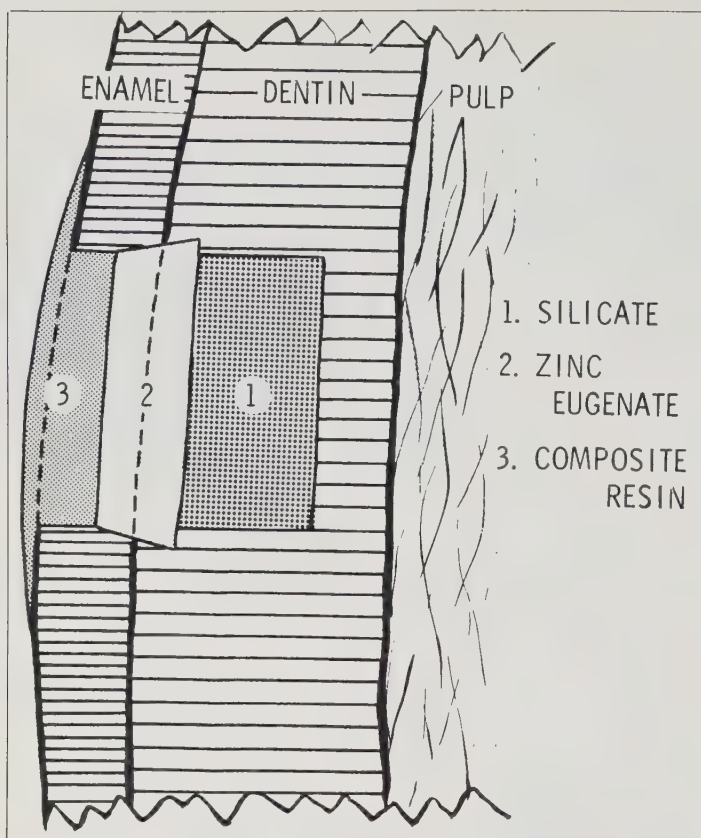
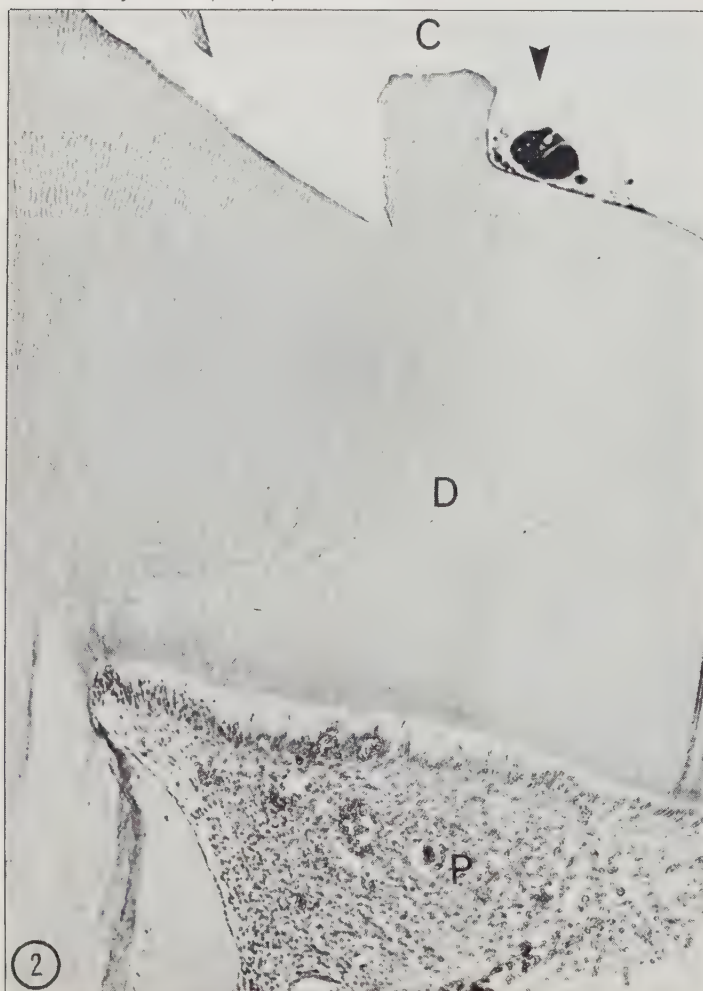


Fig 1 Illustrating the method of treatment of experimental Class cavities.

Fig 2 Photomicrograph of monkey molar tooth stained by the Brown Brenn method. C, cavity, D, dentine, P, pulp. Bacteria are indicated by arrow. (x 160).



haematoxylin and eosin and Brown Brenn stains. Pulpal reaction was assessed by examination of tooth sections stained with haematoxylin and eosin. The criteria examined were the presence of hyperaemia, exudate cells, necrosis, disruption or reduction of the odontoblast layer and the thickness of the pre-dentine. Use of the Brown Brenn stain allowed the determination of the presence or absence of bacteria or bacterial debris.

Results

Of the 32 teeth yielded from the experiment, 16 constituted control and 16 experimental. The distances from the pulp to the floor of the cavities ranged from 0.1 mm to 0.02 mm. From both the control and experimental groups, one tooth was discarded because of bad orientation during section cutting. Thus it is from 15 control and 15 experimental teeth that the results are being presented.

None of the sections examined showed pulp necrosis. However, there was evidence of exudation of cells into the pulp matrix, disruption of the odontoblast layer and hyperaemia. An increase of the pre-dentine was also seen.

In the control group of 15 teeth, 11 had evidence of pulpal damage and on examination of the alternate sections stained with the Brown Brenn method, bacteria were positively identified in all 11 (Figs 2 and 3).

The experimental group of teeth, by contrast, showed no pulpal damage. Instead, the common finding was as shown in Fig 4, namely, the presence of a thick irregular osteodentine with some cell inclusions and a reduced number of odontoblasts bordering the pulpal wall in this area. From examination of Brown Brenn stained sections, one tooth presented what appeared to be bacterial debris. However, there was no evidence of pulpal damage in the corresponding haematoxylin and eosin sections.

Discussion

The results of the study confirm the recent report of other workers¹⁵ in that where cavities were treated with the microbicidal solution, no pulpal damage was seen even when silicate was placed in direct contact with the cavity floor. By contrast, when silicate was placed in the prepared cavities, after only a wash in tap water and air drying, pulpal damage was in evidence at the termination of the experiment, namely, three weeks afterwards. The evidence presented in 11 teeth seemed to indicate that the cause of this pulp damage was the presence of bacteria in the cavity floor and walls. That positive evidence of bacterial presence in the remaining four control teeth was missing in no way negates such a hypothesis. In the experimental series only one tooth showed any signs of bacterial debris on the floor of the cavity and there was no evidence of pulpal abnormality in any of these teeth other than a thickened pre-dentine layer. This finding is typified in Fig 5. The widened pre-dentine or the irregular dentine with cell inclusions is likely

Fig 3 Higher power photomicrograph demonstrating (a) bacterial colonies on the floor of the tooth cavity, and (b) remnants of the silicate filling material — Brown Brenn (x 880).

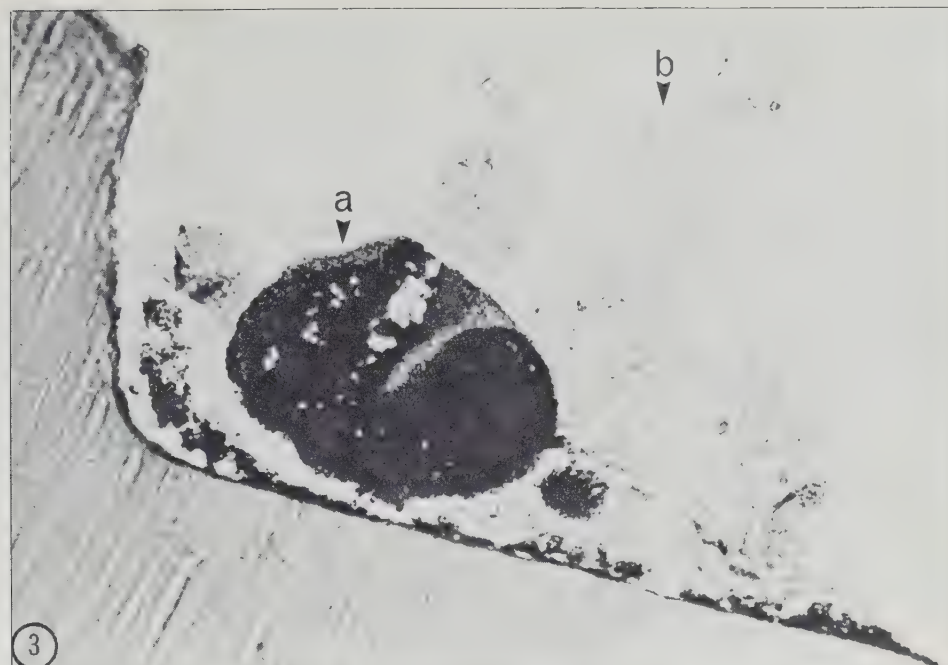


Fig 4 Photomicrograph of a tooth in the experimental series restored according to Fig 1. Pulp reaction demonstrates thick irregular osteodentine and some cell inclusions. (x 240 haematoxylin and eosin).



Fig 5 Photomicrograph illustrating little pulp reaction in a tooth of the experimental series, apart from a thickening of the predentine, as arrowed. (112 haematoxylin and eosin).

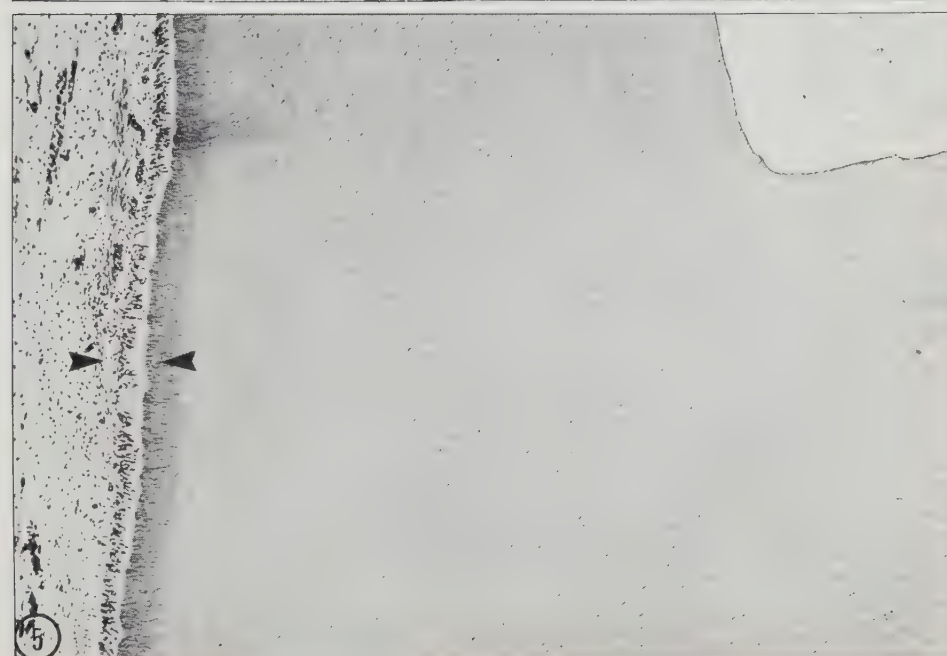




Fig 6A Photomicrograph of control series section stained Brown Brenn x 132. Note bacteria, indicated by arrow, on cavity floor and pulp odontoblast layer disruption.



Fig 6B Higher power photomicrograph of Fig 6A. Brown Brenn x 1400. Note bacteria in dentinal tubules indicated by the arrow.

to be the effect of cavity preparation; the loss of the original odontoblasts and the activation of new cells producing a low differentiated hard tissue. In no way was such a healing reaction interrupted by the presence of silicate in direct contact with the dentine, since this response was seen in all experimental teeth examined. The difference recorded was only one of degree of thickness of the dentine of repair. In the tooth where bacterial debris was present, there was no evidence of bacteria in the dentine between the pulp and the cavity floor and it is concluded that the bacterial debris, although present, represented non-viable organisms. This is in contrast to the findings in the control series where bac-

teria were found at various levels between the pulp and the cavity walls and floor. Such a finding is well illustrated in Figs 6a and 6b.

Recent work has demonstrated an outward movement of fluid from the dentinal tubules.^{17,18} Such an outward flow must, in a sense, prevent ingress of foreign material to the tubules. Yet, organisms were found in the control series of this study within the dentine, and in each of these teeth the pulp showed evidence of inflammation. The layer of bacteria in the cavity of the water washed control teeth varied both in thickness and in position. Some were found on the cavity floor and line angles, whereas other material was

demonstrated on the walls of the cavity. It has been shown that the grinding debris always present on prepared surfaces¹⁹ may contain bacteria which may survive and increase in number under composite resins.²⁰ The same may be true for silicate, as has been demonstrated in recent studies.^{14,15,21} On the other hand, that shrinkage of silicate occurs after insertion has been well documented;¹⁶ therefore some bacteria may have gained entry after placement of the restoration. The experimental series was sealed against ingress of bacteria by both zinc oxide eugenol cement and an enamel acid etched retained composite resin. No pulpal reaction was seen in this series even though silicate cement was in direct contact with the dentine. Neither were bacteria demonstrated with Brown Brenn staining of the sections.

Conclusion

It is concluded that it is bacterial irritation which is important in causing pulpal damage when unlined silicates are placed as a restorative material in teeth. Further work gives additional support to this contention.²²

Dr. Beagrie is chairman, Division of Clinical Sciences, Faculty of Dentistry, University of Toronto, 124 Edward St., Toronto.

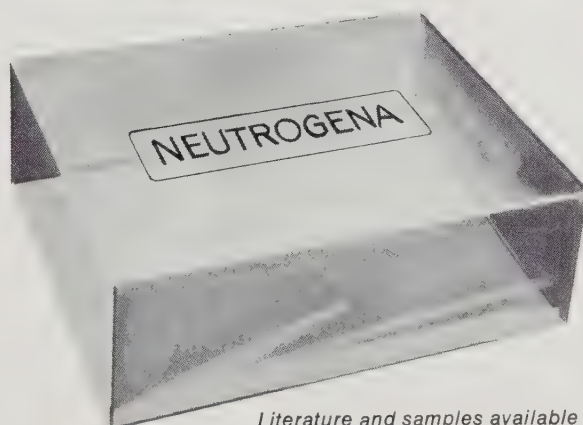
Dr. Brännström is associate professor at the Department of Oral Histopathology, Karolinska Institutet, School of Dentistry, Stockholm, Sweden. He was a recipient of the McLaughlin Visiting Scientist Award during May 1975 when he lectured and discussed his work in the Faculty of Dentistry, University of Toronto.

- 11 Silberkweit, M., Massler, M., Schour, I. et al. Effects of filling materials on the pulp of the rat incisor. *J Dent Res* 34:854, 1955.
- 12 Johnson, R. H., Christensen, G. J., Stigers, R. W. et al. Pulpal irritation due to the phosphoric acid component of silicate cement. *Oral Surg* 29:447, 1970.
- 13 Roydhouse, R. H. Silicate cements and acid production. *J Dent Res* 40:258, 1961.
- 14 Brännström, M. and Nyborg, H. The presence of bacteria in cavities filled with silicate cement and composite resin materials. *Swed Dent J* 64:149, 1971.
- 15 Brännström, M. and Vojinovic, O. Response of the dental pulp to invasion of bacteria around three filling materials. *J Dent Child* 43:83, 1976.
- 16 Nelsen, R. J., Wolcott, R. B. and Paffenbarger, G. C. Fluid exchange at the margins of dental restorations. *J Amer Dent Ass* 44:288, 1952.
- 17 Brännström, M. and Åström, A. The hydrodynamics of the dentine; its possible relationship to dentinal pain. *Int Dent J* 22:219, 1972.
- 18 Johnson, G., Olgart, L. and Brännström, M. Outward fluid flow in dentin under a physiologic pressure gradient: Experiments in vitro. *Oral Surg* 35:238, 1973.
- 19 Brännström, M. and Johnson, G. Effects of various conditioners and cleaning agents on prepared dentin surfaces: A scanning electron microscopic investigation. *J Pros Dent* 31:422, 1974.
- 20 Brännström, M. and Nyborg, H. Cavity treatment with a microbicidal fluoride solution: Growth of bacteria and effect on the pulp. *J Pros Dent* 30:303, 1973.
- 21 Qvist, V. Pulpal reactions in human teeth to tooth coloured filling materials. *Scand J Dent Res* 83:54, 1975.
- 22 Beagrie, G. S. Unpublished data.

- 1 Palazzi, S. Über die anatomischen Veränderungen der Zahnpulpa im Gefolge von Silikatzementfüllungen. *Z.Stomat* 21:279, 1923.
- 2 Zander, H. A. Reaction of dental pulps to silicate cement. *J Amer Dent Ass* 33:1233, 1946.
- 3 Langeland, L., Guttuso, J., Jerome, D. R. et al. Histological and clinical comparison of Addent with silicate cements and coldcuring materials. *J Amer Dent Ass* 72:374, 1966.
- 4 Jørgensen, K. D. Tandfyldningsmaterialer. *Nordisk Klinisk Odontologi*. Kap. 9, afsn. VII, p.14, København 1967.
- 5 Schwartz, M. L., Niblack, B. F., Alter, E. A. et al. In vivo studies on the penetration of dentin by constituents of silicate cements. *J Amer Dent Ass* 76:573, 1968.
- 6 Manley, E. B. A preliminary investigation into the reaction of the pulp to various filling materials. *Brit Dent J* 60:321, 1936.
- 7 Idem. Experimental investigation into the early effects of various filling materials on the human pulp. *Proc Roy Soc Med* 34:693, 1941.
- 8 Harvey, W., LeBrocq, L. F. and Rakowski, L. The acidity of dental cements. *Brit Dent J* 77:61, 1944.
- 9 Shroff, F. R. Effects of filling materials on the dental pulp; an histological experimental study with special reference to synthetic porcelain. *NZ Dent J* 42:99 and 145, 1946.
- 10 Idem. Effect of filling materials on the dental pulp; an histological experimental study with special reference to synthetic porcelain. Part II. *NZ Dent J* 43:35, 1947.

**If you wash your hands
50 times a day
(as most dentists do)**

You need Neutrogena



Literature and samples available on request



PROFESSIONAL PHARMACEUTICAL CORP.
2795 BATES ROAD, MONTREAL 251, QUEBEC • (514) 739-3633

CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE

Direct advertising copy to:
Marie Cosgrave, Classified Advertising Manager,
Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6,
Telephone: (613) 523-1770.

CLASSIFIED ADVERTISING RATES
(Per Insertion Per Issue):

Minimum (50 words or less)	\$15 00
Each additional word	.30
Service charge for C.D.A. Box No.	2.00

DISPLAY CLASSIFIED ADVERTISING RATES:
Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

OFFICES AND PRACTICES

BRITISH COLUMBIA — Abbotsford. Dental office for rent in modern professional building in Abbotsford, adjacent to hospital. Panoramic view. Apply: McCallum Terrace Holdings, 2151 McCallum Rd., Abbotsford, B.C. V2S 3N8.

BRITISH COLUMBIA — Abbotsford. Build your own practice. Growing centre in the beautiful Fraser Valley, Abbotsford. 1/2 duo practice, three operatories in Medical-Dental Tower next to M.S.A. Hospital. Available June-July 1977. Preventive oriented practice. Share reception and waiting area. For further information, contact: Dr. R. H. F. Jost, 853-7881 or nights 853-3033. Written requests to: McCallum Tower, 401 - 2151 McCallum Rd., Abbotsford, B.C. V2S 3N8.

BRITISH COLUMBIA — Burns Lake. Dentist wanted to practise in the Village of Burns Lake in northern British Columbia. Office space is available in a new Medical-Dental Building, constructed June 1976. There would be room for one or two dentists in the building. It is located directly across from the Hospital. The doctors, presently in the building, would be willing to provide anesthetic services for the dentists, either in the clinic or the hospital. This is an ideal opportunity for a young dentist in an expanding town, in one of the most beautiful recreational areas in British Columbia. Contact: Cotohe Management and Professional Services, PO Box 167, Burns Lake, B.C. V0J 1E0.

BRITISH COLUMBIA — Penticton. Long established general family practice for sale. Two operatories, lab, dark room, reception area, waiting room, private office, situated in the beautiful Okanagan Valley. Contact: Dr. J. R. Day, 376 Main St., Penticton, B.C. V2A 5C3. Phone: (604) 492-2709.

BRITISH COLUMBIA — Terrace. For lease with option to purchase, general dental practice. Modern three operator, preventive oriented, with good staff. Will also consider long term associate. Contact: Dr. Talarico, 4546 - 10 Park Ave., Terrace, B.C. V8G 1V4, phone: (604) 635-3031.

BRITISH COLUMBIA — Vancouver. Practice for sale; prime location; concrete building with elevator, excellent clientele; certified dental assistant will stay; developed over 25 years. Terms. Phone: 738-5727.

BRITISH COLUMBIA — Vancouver. Well established, high gross, ultra modern, three operator preventive-oriented practice for sale. For details and more information, write to CDA Box Number 1658.

BRITISH COLUMBIA — Vancouver (Burnaby Area). Dentist, new to Vancouver, with 10 years' private practice experience, wishes to purchase established practice, or associate leading to purchase. Reply to CDA Box Number 1684.

BRITISH COLUMBIA — Vancouver. Well established restorative and preventive dental practice in downtown Vancouver for sale or lease. Patients are sincere and appreciative, demanding comprehensive type treatment. Good liaison established with other specialists in the building — lots of referred patients. Office suitable for one or two dentists; approximately 850 sq. ft. Four operatories with up to date equipment, fully equipped dental lab, dark room, reception area, waiting room, private office, storage room, and central high-volume suction. Present dentist returning to school. Contact: Dr. K. Lee, #529 - 925 West Georgia St., Vancouver, B.C. V6C 1R5. Phone: 684-9616.

BRITISH COLUMBIA — Vancouver. For sale: General practice of 32 years. Office located in a professional building on West Broadway. Two operatories, plus lab, reception room, business office, dark room. Present owner contemplates early retirement. Asking price \$10,000 firm. For further details contact: Dr. C. T. Billingsley, phone: (604) 738-4110 office, (604) 261-8362 home.

BRITISH COLUMBIA — Victoria. Ideal location, available in June or July. Two operatories, completely plumbed, wired for two XRM heads, suction. Most modern downtown air-conditioned office building. Laboratory. Suction unit, compressor, some equipment negotiable. Available at fraction of present cost of installation. Large parkade next door. Please reply to CDA Box Number 1686.

ALBERTA — Calgary. For Sale. Calgary practice with high gross. Three fully equipped operatories with modern equipment. Space for fourth operator. Reply to CDA Box Number 1662.

ALBERTA — Calgary. Well established general practice available. Owner retiring for health reasons. Three large operatories, two fully equipped with support rooms. X-ray and well equipped laboratory. Modern building, downtown, with reasonable rent and low general overhead. Reply to CDA Box Number 1677.

ALBERTA — Calgary. Thirty-year-old well developed practice. Heavily booked involving all stages of dentistry. Two operatories, shared waiting room, business office and small laboratory. Low rent, good gross, cash practice. Staff available. Direct enquiries to: CDA Box Number 1690.

ALBERTA — Elk Point. Twenty-year-old "rural" practice for sale in small northeastern Alberta town, 700 sq. ft. office with three operatories. Hospital privileges, high gross, low overhead. Excellent opportunity for immediate take over. Ideal outdoor recreation area with lakes and hunting. No cash outlay required. Reply to CDA Box Number 1692.

ALBERTA — Grand Centre. Dentist urgently required for a high gross, heavily booked practice in a town of approximately 3,000 population and a drawing area of an additional 15,000. Would like to sell spacious ultra-modern dental building the practice is housed in, or can be leased if desired. No other dentist presently available to serve this area. High immediate income assured in a "ready-to-move-in" practice. Call or write: Dr. J. F. Stengl, Box 809, Grand Centre, Alta., phone: (403) 594-5274.

ALBERTA — Lethbridge. Great opportunity: Move into a pleasant, established, suburban family practice in one of Canada's most pleasant growing cities — Lethbridge, Alberta. High gross, low overhead, no parking problems, spacious ground floor office, carpeted, air-conditioned. Located between the two hospitals. Associate for a time or take over now. Contact: Dr. B. Wayne Matkin, 1510 - 9th Ave. South, Lethbridge, Alta. Phone: (403) 327-3410 or 327-4922.

ALBERTA — Red Deer. Office space available. Downtown Professional Building. Excellent for starting practice. Reasonable rent. Lease hold improvements to be negotiated. Contact: Dr. V. Chafekar, 406 Professional Building, Red Deer, Alta. T4N 1X5. Phone: (403) 347-5224.

ALBERTA — Southern. For rent, sale, or associateship. Only dentist serving a large area. New building, equipment, and high gross income. Reply to CDA Box Number 1679.

SASKATCHEWAN — Saskatoon. Fully equipped, four operator, general dentistry practice for sale or lease. Well established. Hospital privileges available. Room for associate if desired. Approximately 1,300 sq. ft. which includes lab, waiting room, reception area, private office, private washroom and public washrooms. Reply to CDA Box Number 1685.

MANITOBA — Winnipeg Area. Busy general practice for sale or lease. Two four-handed operatories. Most modern equipment. Carpeted, air-conditioned. Located in a medical centre. Gross \$100,000. 4½-day week. Minimal capital outlay, low rent. Available summer 1977. Occupant leaving — family circumstances. Please reply to CDA Box Number 1688.

ONTARIO — Brampton. Dental office for rent. New Medical-Dental building conveniently located opposite the hospital. Will assist with partitioning. Phone: 451-5802 or 451-2024.

ONTARIO — Caledon Hills Area. Busy, well established, modern general practice for sale. Two operatories. Hygienist. Located in a cosmopolitan, developing country area within easy reach of Toronto night-life. Returning for post-graduate studies. Available immediately. Very reasonable terms. Low cash outlay. Phone: Dr. C. P. Minett (519) 855-4193 office, or write: R.R. 2, Guelph, Ont. N1H 6H8

ONTARIO — Clifford. Opportunity for individual dentist in attractive, new Medical Centre at Clifford (75 miles northwest of Toronto). Equipment could be supplied if necessary. Practice would service approximately 3500 people. Good school and recreational facilities. Apply to: Clifford and Community Medical Centre Board, Box 159, Clifford, Ont. N0G 1M0.

ONTARIO — Killaloe. The Village of Killaloe requires the services of a Dental Surgeon to establish a practice in the newly built Medical Centre which is available immediately. This area is designated as being underserved by the Ontario Ministry of Health. A dental surgeon establishing practice here may apply to the Ontario Ministry of Health for grant assistance. Apply to: Mrs. Jean Cybulski, Clerk, Village of Killaloe Sta., Box 159, Killaloe, Ont. K0J 2A0.

ONTARIO — Mississauga. Medical-Dental Building, opposite Mississauga 500-bed hospital (planned extension to 730 beds). Located in north America's fastest growing city. 250,000 present population — planned increase to 750,000 by 1990. One stop professional Medical-Dental facility with lab, X-ray and pharmacy. Recent surveys indicate need for General Practitioners in this area. Part-time space available. Call or write: Ken Hunt, Haney, Hunt and Bowden Ltd., 230 Lakeshore Rd. East, Mississauga, Ont. L5G 4M3, phone: (416) 274-1521.

ONTARIO — Mitchell. Excellent opportunity available for dentist wishing to establish a lucrative practice in a new specially designed professional building. Medical offices in the same location. For further information, write to: Mitchell Health Centre, P.O. Box 321, Mitchell, Ont., or phone: (519) 348-8512.

ONTARIO — Ottawa. Associateship or Sale: This is a busy well-established practice situated in downtown Ottawa in modern professional building. Ideal opportunity for dentist who wishes to relocate or recent graduate. Reply to CDA Box Number 1696.

ONTARIO — Ottawa. Family practice for sale in professional building. Consists of 900 sq. ft. comprising two fully equipped operatories (including analgesia), laboratory, hygienist room, private office, reception room. Fully air-conditioned. Phone: (613) 731-5034 after 5:00 p.m.

ONTARIO. Office space for rent in new building. Attractive lakeside location, approximately 50 miles east of Toronto. Tennis, boating, skiing, curling and many other recreational facilities available. Growing community. Good opportunity to establish dental practice. Please reply to CDA Box Number 1693.

ONTARIO — Toronto. General practice for sale in suburban Toronto. Established eight years. Owner returning to school. High gross with wide variety of work. Suitable for one or two dentists. Office recently completely renovated. Three fully equipped Cox operatories with room for two more. Panorex, automatic developer. Available July 1977. Contact: Blair Pollack, phone: (416) 491-7391.

ONTARIO — Toronto. Two-year-old practice for sale. Located in fast growing area of north suburb. Fully equipped with modern equipment in good working order. Illness forces sale. Reply to CDA Box Number 1689.

QUEBEC — Banlieue de Montréal. Bureau comprenant deux salles opératoires toutes équipées à vendre (prix dérisoire). La clientèle remonte à plus de 75 ans de pratique. Réussite assurée au départ. (514) 773-9343 ou 772-5142.

NOVA SCOTIA — Central Halifax Location. Close to universities and hospitals. Dentist is anxious to sell or rent because of other commitments. Approximately 800 sq. ft. with two operating rooms. Large windows, bright, ground floor. Practice has been established for 30 years. Please phone: (902) 423-6720, or write: S. Chernin, 5943 Spring Garden Rd., Halifax, N.S.

CHAIRMAN

DEPARTMENT OF COMMUNITY DENTISTRY AND MANPOWER DEVELOPMENT

UNIVERSITY OF ALBERTA

Men and women are invited to apply for the position of Chairman, Department of Community Dentistry and Manpower Development, Faculty of Dentistry, University of Alberta.

The Department presently has full undergraduate programs in Dental Hygiene, Preventive and Community Dentistry and Dental Auxiliary Utilization including external programs.

The Chairman shall be the chief executive officer of the Department for an initial five year period. Rank and salary will be commensurate with experience and qualifications. Applicants should be eligible for licensure in the Province of Alberta. Intramural private part-time practice is available.

Enquiries and applications with curriculum vitae should be forwarded to:

**Dr. D. M. Collinson, Acting Dean and
Chairman, Selection Committee,
Faculty of Dentistry,
University of Alberta
Edmonton, Alberta T6G 2N8**

CHAIRMAN

DEPARTMENT OF CLINICAL DENTAL SCIENCES

UNIVERSITY OF ALBERTA

Men and women are invited to apply for the position of Chairman, Department of Clinical Dental Sciences. Departmental programs include preclinical and clinical undergraduate and graduate teaching.

The Chairman shall be the chief executive officer of the Department for an initial five year term. Rank and salary will be commensurate with experience and qualifications. Applicants should be eligible for licensure in the Province of Alberta. Intramural private part-time practice is available. The position available will be commencing July 1, 1977.

Enquiries and applications should be forwarded to:

**Dr. D. M. Collinson, Acting Dean and
Chairman, Selection Committee,
Faculty of Dentistry,
University of Alberta
Edmonton, Alberta T6G 2N8**

ASSOCIATESHIP AVAILABLE

BRITISH COLUMBIA — Fernie. Full-time associate required with option to buy in about a year. Contact: Dr. R. H. Campbell, Box 130, Fernie, B.C.

BRITISH COLUMBIA — Fort Nelson (northeast). Associate required with view to partnership if desired. Booming town, high income, relaxed environment. Four-handed dentistry, preventive oriented. Phone: (604) 774-6444 (day) or 774-2484 (evening), or write: Dr. J. Morris, Box 958, Fort Nelson, B.C. V0C 1R0.

BRITISH COLUMBIA — Vancouver. Oral Surgery Associate required for established Vancouver practice. Reply to CDA Box Number 1678.

BRITISH COLUMBIA — Vancouver Island. Nanaimo dentist requires associate on expense sharing basis, in downtown office. There are the equivalent of one-and-a-half rooms, but lots of work. Available beginning of July 1977. Write to: Dr. L. Lewis, 170 Wallace St., Nanaimo, B.C., or phone: (604) 753-4711.

BRITISH COLUMBIA — Victoria. Young, associate dentist required. Four-chair modern operatories. Strictly medical-dental building (opposite Jubilee General Hospital). General anaesthesia privileges. Family-oriented practice. No capital outlay. Reply: Dr. B. Rauch, #310 - 1900 Richmond Ave., Victoria, B.C. V8R 4R2.

ALBERTA — Edmonton. Modern, spacious, downtown group practice which is patient oriented, providing a congenial staff-dentist relationship, four-handed dentistry, five partners, one associate, three hygienists, one control therapist, private general anaesthesia area administered by qualified anaesthetist, board room and panorex. The associateship may be considered for one or two years with option for full participation if all parties are compatible. Reply to CDA Box Number 1695.

ALBERTA — Edmonton. Associate wanted on a percentage or facility leasing basis, in a preventive oriented office, situated near city centre. Immediate high income assured. Please reply to CDA Box Number 1691.

SASKATCHEWAN — Saskatoon. Full time Associate required in a busy, high gross family practice. Two fully modern operatories available to associate in five-chair office. Possibility of purchase or partnership. Modern, air-conditioned Medical-Dental Building. Contact: Dr. R. E. Dickson, 621 Medical Arts Building, Saskatoon, Sask. S7K 3H3. Home phone: 653-3173.

MANITOBA — Steinbach. Full-time associate required for group practice. Experience preferred but not essential. Modern office and equipment. Option open for full participation if compatible. All the benefits of a rural practice, but 45 minutes from downtown Winnipeg. Contact: Dr. Jim Koepke, Box 2195, Steinbach, Manitoba. Phone 326-9511 (office), 326-2003 (residence).

MANITOBA — Winnipeg. Modern preventive group practice requires a full-time associate who would practise part-time in our Winnipeg office and part-time in our rural office. For further information, please contact: Mr. Bruce Campbell, Administrator, Fort Rouge Management, 704 Osborne St., Winnipeg, Man. R3L 2B9.

ONTARIO — Cambridge. An opportunity for an associateship is available in a busy centrally located high gross practice. No investment necessary and initial percentage arrangement could become future group partnership for compatible individual. The practice is situated in a newly renovated six operator, 1800 sq. ft. office, which utilizes the open concept with Cox Systems units, Pelton and Crane chairman chairs, Ritter X-rays and an Orthopantomograph. It is a progressive prevention oriented practice encompassing all phases of general dentistry with particular emphasis on crown and bridge and endodontics. For further information please contact: Dr. Robert Leigh, 10 George St. North, Cambridge, Ont. Phone (519) 623-8555 (office) or (519) 632-7737 (home).

ONTARIO — Windsor Area. Associate required in young, progressive group practice. Opportunity to enter group later. New building and equipment; surplus of patients; pleasant, uncrowded office surroundings. Located in small town near Windsor, with close access to all urban and rural social and recreational facilities. Phone: (519) 776-6277 or write: Dr. D. J. Charters, Box 190, Harrow, Ont. N0R 1G0.

NOVA SCOTIA — Halifax. Associate, preferably with some general practice experience, required for a progressive, family oriented practice. High gross. Hygienist and full auxiliary assistance available. Please reply to CDA Box Number 1687.

Consultant Public Health Dentistry: \$30,100-\$38,100

The health promotion branch, MINISTRY OF HEALTH, seeks an experienced dentist to design and promote a comprehensive preventive and treatment dental care program and services to achieve optimum dental health for all ages. You will also participate in the ministry's underserved area program by chairing the selection committee, recruit dental students and dentists and administer the dental component of the program; provide consulting services to the local health units and assist in the development of standards and guidelines. Location: Toronto with some provincial travel.

Qualifications: licence to practice dentistry in Ontario and a diploma or degree in dental public health; five years' experience and proven administrative ability in directing a large scale dental health program.

Please submit application or resume as soon as possible to: **Senior Personnel Officer, File HL-65-46/77, Human Resource Branch Unit "B", 7 Overlea Blvd., 3rd Floor, Toronto, Ontario, M4H 1A8.**

This position is open equally to men and women.



**Ontario
Public Service**

ASSOCIATESHIP WANTED

ONTARIO — Graduate (1972) desires associateship in modern preventive dental practice. Experience in general dentistry with particular enjoyment of crown and bridge. All areas of the province considered with some preference for eastern Ontario. Available September 1977. Reply to CDA Box Number 1683.

OPPORTUNITY AVAILABLE

BRITISH COLUMBIA — Abbotsford. Preventive and perio-oriented group practice requires hygienists. Presently four hygienists in practice of four dentists. Periodontist now opening office with group and will require two hygienists. General dentist in group also requires hygienist. Abbotsford affords hiking, skiing, swimming and boating close by. It is 40 minutes from downtown Vancouver and Pacific ocean beaches. Modern offices and good dentist-hygienist relationships exist. Excellent remuneration and working conditions. All enquiries (call collect) to: Dr. A.R. Shearer, 401 - 2151 McCallum Rd., Abbotsford, B.C. Office: 853-6441; home: 853-1680.

BRITISH COLUMBIA — Kamloops. Dental Hygienist and Certified Assistant required full- or part-time. Five chairs, eight people, one dentist. New office. Humanistic, preventive, participative practice. Top salary. Apply to: Cedar Dental Centre, 3122 Westsyde Rd., Kamloops, B.C., or call collect: (604) 579-8727.

BRITISH COLUMBIA — Vancouver. Dental Hygienist wanted for position of Instructor in Department of Orthodontics, University of British Columbia. The applicant must be registrable in British Columbia and it is desirable, but not mandatory, that the applicant possess a Bachelor's degree and have five years' experience. Duties include teaching related to dental undergraduate and hygiene program; organization and administration related to supplies, equipment and budget; coordination of faculty-patient-student activities; preparation of teaching aids; some chairside assisting. Salary is negotiable according to qualifications and experience; part-time extramural practice permitted. Applications should be sent to: Dr. C. Lear, Head, Department of Orthodontics, Faculty of Dentistry, University of British Columbia, Vancouver, B.C. V6T 1W5.

ALBERTA — Innisfail. Dentist needed to cover very busy practice for four to six weeks, May-June 1977. Modern office, four-handed dentistry, dental hygienist; located in central Alberta (one hour drive north of Calgary). Reason: owner travelling overseas. Write: Dr. C. R. Tym, Box 339, Innisfail, Alta. T0M 1A0, or phone: (403) 227-3011, 227-5312 or 886-5544 (evenings).

ALBERTA — Rocky Mountain House. Small town warmth and friendliness available for an intra-oral dental assistant in an extremely modern and friendly three operator, one dentist practice in Rocky Mountain House (population 5,000). Job commences in July. Phone: (403) 845-3111 days, (403) 845-2668 evenings, or write: Box 189, Rocky Mountain House, Alta. T0M 1T0.

SASKATCHEWAN. The Department of Health, Saskatchewan Dental Plan, has several positions in various locations, available to dentists interested in the Saskatchewan Dental Plan for Children. These positions provide an opportunity for members of the dental profession to become involved in North America's first province wide, publicly run, Dental Program for Children. A team approach is used in promoting both preventive and treatment services to children up to 12 years of age. Saskatchewan Dental Nurses, Certified Dental Assistants and Dentists, together with supportive staff make up the teams. Basic duties include examination, diagnosis, treatment, planning and supervision of dental nurse teams. Dental treatment services for children are also carried out by the supervising dentist. Incumbents must be eligible for registration with the College of Dental Surgeons of Saskatchewan, and have practice experience related to Pedodontics or Public Health. Graduates of Canadian Dental Schools and Accredited United States Dental Schools after 1948, can register in Saskatchewan without further examination. Salary \$25,584- \$34,836 (Public Health Dental Officer). Salary commensurate with experience and qualifications. COMPETITION NUMBER: 613020-7-281. Closing date: As soon as possible. For further information, please write to the Director, Saskatchewan Dental Plan, Department of Health, 3211 Albert Street, Regina, Sask. S4S 0A6, or phone: (306) 527-1648. Forward your application forms and/or resumes to: Public Service Commission, 1820 Albert St., Regina, Sask. S4P 2S8, quoting position, department and competition number.

MANITOBA — Winnipeg. Oral surgeon certified to practise in Manitoba, required for a busy Winnipeg practice. Object partnership. Please submit qualifications and curriculum vitae, and recent photo to CDA Box Number 672.

ONTARIO — University of Toronto. A position is available in the Department of Anatomy, Division of Gross Anatomy, for a person who has demonstrated effectiveness in the teaching of Gross Anatomy and Neuroanatomy to dental students. A D.D.S., or similar dental qualification, and/or a Ph.D. degree with good evidence of achievement in research in one of the anatomical sciences is essential. Preference will be given to persons who can produce evidence of good productivity of high quality dentally oriented research. Appointment will be made at the Assistant Professor level with a salary commensurate with the applicant's qualifications and experience. Interested persons should send a curriculum vitae and the names of at least three referees to: Dr. B. Liebgott, Chairman of the Search Committee, Department of Anatomy, Medical Sciences Building, University of Toronto, Toronto, Ont. M5S 1A8.

ONTARIO — Windsor. Hygienist wanted for preventive dental practice. We are offering good hours, high salary and relaxed working conditions. Phone: John Thomson any time: (519) 948-4119 or (519) 735-2263, or write: 2655 Lauzon Rd., Windsor, Ont. N8T 2Z5.

ONTARIO — Dental Underserved Areas. The Ontario Ministry of Health offers financial support for dentists to establish practices in designated underserved dental areas. Locations are available throughout Ontario. Incentive grants, payable over four years, are \$18,000 in Northern Ontario and \$14,000 in Southern Ontario. Alternatively, a guaranteed net professional income of \$28,000 per annum is offered in Northern Ontario. A limited number of salaried positions are open on mobile dental coaches. Apply to: Dental Officer, Program for Underserved Areas, 7 Overlea Blvd., Toronto M4H 1A9. Phone: (416) 965-5036.

QUEBEC — McGill University, Montreal. Full-time position for Periodontist, preferably with background experience or interest in Preventive Dentistry. Candidates must be eligible for licensure by Order of Dentists of Quebec, have a National Dental Examining Board Certificate and be prepared to fulfill French language requirements enabling him/her to teach clinically and enjoy consulting and private practice privileges. Temporary license would be granted in the interim. *Academic rank and duties:* Assistant Professor to participate in the undergraduate teaching of periodontics and preventive dentistry. Salary commensurate with teaching and clinical experience. Please send curriculum vitae and reference to: Dr. R. F. Harvey, Faculty of Dentistry, McGill University, 3640 University St., Montreal, P.Q. H3A 2B2.

OPPORTUNITY WANTED

BRITISH COLUMBIA — Vancouver. Experienced Dental Technician desires opportunity to establish lab with a dentist or group of dentists, preferably Vancouver. Reply to CDA Box Number 1694.

SOUTHERN ONTARIO — Dentist and Oral Surgeon: Couple desires associateships in early 1978. Dentist is 1974 University of Toronto graduate with Internship and two years' experience in general dentistry. Oral Surgeon is 1974 graduate of Ohio State University and is completing residency at Chicago hospital. Both have C.N.B. Reply to CDA Box Number 1682.

QUEBEC — Montréal. Dentiste bilingue désire travailler pour un autre dentiste à plein temps ou à temps partiel, Montréal ou banlieue ouest. Dr. L. Masse, C.P. 162, Beaconsfield, P.Q.

MISCELLANEOUS

BRITISH COLUMBIA — Vancouver. Mix work and pleasure with a mobile dental unit/vacation home by purchasing this 31' camperized greyhound bus. It is completely self-contained with power, water, and air, is completely outfitted as a dental office for use in rural areas, and is ideal for recreational purposes as it is easily converted into a comfortable mobile home. All enquiries: (604) 926-6051 before 6:00 p.m.

VACATION RENTAL

FLORIDA — Port Charlotte. Luxurious one or two bedroom condominiums. All conveniences: swimming pool, tennis, shuffle court. Near golf course, shopping mall, health spa. Weekly, monthly, seasonal. For further information, contact: Dr. W. Madronich, 275 Hixon Rd., Hamilton, Ont. Phone: (416) 561-9243.

**FACULTY OF DENTISTRY
THE UNIVERSITY OF ALBERTA
FIXED PARTIAL PROSTHODONTICS**

Applications are invited for a full-time teaching position in the Division of Fixed Partial Prosthodontics. Candidates should have completed an accredited graduate or postgraduate certification programme and be eligible for licensure in the Province of Alberta.

Salary and rank are negotiable according to qualifications and experience. Intramural part-time practice in new facilities is available.

Applications, accompanied by curriculum vitae, should be sent to:

Dr. W. J. Simpson
Acting Chairman
Department of Clinical Dental Sciences
Faculty of Dentistry
University of Alberta
Edmonton, Alberta, Canada T6G 2N8

**UNIVERSITY OF ALBERTA
FACULTY OF DENTISTRY**

PERIODONTICS

Applications are invited for a full time position in the Department of Periodontics. Applicant must be a graduate of an accredited periodontal program and should have a broad clinical and academic background with research experience.

The appointment will be at a senior level, salary according to qualifications and experience.

Opportunity is available for involvement in the development of a new periodontal curriculum.

Intramural part time practice in new facilities is available.

Please submit application and curriculum vitae to:

**Dr. P. D. Schuller, Department of Periodontics,
Faculty of Dentistry, University of Alberta,
Edmonton, Alberta, Canada T6G 2N8**

MANIT^{BA}
CIVIL SERVICE COMMISSION

DENTIST

The DEPARTMENT OF HEALTH & SOCIAL DEVELOPMENT, Mental Health, Brandon Mental Health Centre, requires a person for a position in a large Mental Health complex. Incumbent provides comprehensive dental treatment services in co-operation with other professional treatment programs. Modern clinical facilities. Part-time employment would be considered.

Upon employment, registration and licensure to practise dentistry in Manitoba, experience in private or public health dentistry.

SALARY RANGE: \$24,618-\$30,800 per annum (under review)

This position is open to both men and women.

Apply in writing immediately, referring to #243:

**340 - 9th Street
Brandon, Manitoba R7A 6C2**

ADVERTISERS' INDEX

Astra Pharmaceuticals (Canada) Ltd.	IBC
Block Drug Co. of Canada	213
The L. D. Caulk Co. of Canada	217,218
Colgate Palmolive Ltd.	211
Denco	206
Dentsply International	202,215,221
Charles E. Frosst	224
Kodak Canada Ltd.	IFC
Lever Brothers	207
3M	205
Procter and Gamble	201
Professional Pharmaceutical	243
Siemens Electric	232
Warner Lambert Canada Ltd.	OBC
Weil Dental	238
Whaledent International	237

Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.



"Boy, have I been looking forward to THIS!"

REGISTRATION FORM

77TH ANNUAL
WORLD DENTAL CONGRESS
FEDERATION
DENTAIRE INTERNATIONALE



TORONTO
CANADA

22-28
OCTOBER
1977

For advance registration return one copy with appropriate fees before
September 14, 1977; otherwise register at Congress.

Return to: 1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario, M5W 1X3
CANADA.

PLEASE TYPE OR USE BLOCK LETTERS; WHERE APPLICABLE CIRCLE APPROPRIATE RESPONSE

SURNAME: DENTAL LIBRARY INITIALS: _____ Prof./Dr./Mr./Mrs./Miss _____

ADDRESS: 124 EDWARD ST.,
TORONTO 2

COUNTRY: _____ Language for documents: English / French / German / Spanish

FDI MEMBERSHIP:

Are you a supporting member of the FDI YES/NO

MEMBERSHIP REGISTRATIONS

	FEES
F.D.I. Supporting Member - \$100 before or \$120 after July 1	\$ _____
Canadian Dental Association (Non FDI) Member \$115 before or \$130 after July 1	\$ _____

ADDITIONAL REGISTRATIONS (\$10 each: no fee for spouse or other family member)

REGISTRANT:	SURNAME:	INITIALS:	
Spouse:	_____	_____	\$ _____
Family member:	_____	_____	\$ _____
Auxiliary:	_____	_____	\$ _____
Student:	_____	_____	\$ _____

MILITARY PERSONNEL ONLY

Rank: _____
Attending Military Conference and Field Visit to Base Borden — on Thurs., October 20 YES/NO accompanied YES/NO

SOCIAL PROGRAM

Congress Ball — Tues., October 25.....	(\$30. per person; limited attendance)	\$ _____
Canadian Hoedown — Fun Night — Wed., October 26.....	(\$15. per person)	\$ _____

ADIES PROGRAM

Fashion Show and Luncheon — Mon., October 24.....	(\$12.50 per person)	\$ _____
Sightseeing Tours — English Commentary		
Toronto City — mornings — specify day.....	Mon./Tues./Wed./Thurs. (\$6 per person)	\$ _____
Toronto City and Harbour (bus and boat) — mornings — specify day.....	Mon./Tues./Wed./Thurs. (\$7 per person)	\$ _____
Niagara Falls — all day — specify day.....	Mon./Tues./Wed./Thurs. (\$22 per person including lunch)	\$ _____
McMichael Canadian Art Gallery — 5 hours.....	Tues., October 25 (\$12 per person including lunch)	\$ _____
Antique — all day.....	Thurs., October 27 (\$19 per person including lunch)	\$ _____

TOTAL FEES (CANADIAN \$ ONLY) → \$ _____

MAKE CHEQUES OR MONEY ORDERS PAYABLE TO FDI/CDA WORLD DENTAL CONGRESS

CANCELLATION CLAUSE

Ten per cent will be deducted from registration fees of registrants cancelling up to two months before the Congress and 20 per cent from those cancelling up to one month before the meeting. Money paid for social events by those not attending the meeting will be repaid in full. Money will not be refunded for tickets which cannot be resold during the Congress.

PRE AND POST CONGRESS TOURS

If you are interested in detailed information concerning Pre and Post Convention tours, please check here ☐

SIGNATURE _____ DATE _____

**65 TH ANNUAL
WORLD DENTAL CONGRESS
FEDERATION
DENTAIRE INTERNATIONALE**



**TORONTO
CANADA**

22-28
OCTOBER
1977

One copy to be returned with appropriate fees and the registration form before September 14, 1977 to:—

1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario M5W 1X3
Canada

For room reservations, please print or type three choices

1st DENTAL ARY
2nd 124 EDWARD ST.
3rd TORONTO 2

Please enter my reservations at the above hotel for:

Singles **Twin/
Doubles** **Suites**
1 Bdrm. **2 Bdrm.**

☐ @ \$ ☐ @ \$ ☐ @ \$ ☐ @ \$

If rate requested is not available, the next highest will be assigned.

Please **DO NOT** send your request directly to the **HOTEL**;
it **WILL ONLY DELAY** your confirmation. Please allow
two — three weeks to receive confirmation.

Room will be occupied by: (please print or type)

Name DENTAL
Street 124 EDWARD ST.
City TORONTO 2 State ON Zip
Additional Occupants

Date Arriving AM PM Departing

THE DEADLINE FOR MAKING ADVANCE RESERVATIONS IS SEPTEMBER 14, 1977.

Hotel	Single	Double/Twin	1-Bed Suite	2-Bed Suite
1. Royal York (Hdqts.)	\$35	\$45	\$70 - \$135 (Studio suites \$60 - \$70)	
2. Sheraton Centre	\$33 \$38 \$43 (Cabanas \$59)	\$40 \$47 \$52	\$85 to \$153 (Hosp. Suites \$163 to \$203)	\$128 to \$196
3. Harbour Castle Hilton	\$35	\$42	\$70 - \$95	\$137
4. King Edward	\$20	\$24 \$26	\$38	\$70
5. Lord Simcoe	\$20	\$25		
6. Hotel Toronto	\$35	\$45	\$92 \$102 Add \$10 for double occupancy	\$132 \$152
7. Holiday Inn Toronto Downtown	\$30	\$39 \$42		
8. Bond Place	\$20	\$24		
9. Chelsea Inn	\$25	\$29		
10. Carlton Inn	\$17	\$21		
11. The Westbury	\$29.50	\$36.50		
12. Sutton Place	\$36.50	\$44.50		
13. Town Inn	\$29	\$34		
14. Park Plaza	\$34	\$38		
15. Hyatt Regency	\$38	\$45		
16. Hotel Plaza II	\$28	\$35		
17. Inn On The Park	\$38	\$46		
18. Prince	\$34	\$40		
19. Holiday Inn Don Valley	\$32	\$42		
20. Ramada Inn - Toronto	\$29.50	\$36.50		
21. Bristol Place	\$33.50	\$35.50		
22. Cara Inn	\$28	\$35		
23. Constellation	\$34	\$42		
24. Skyline	\$30	\$36		
25. Toronto Airport Hilton	\$29 - \$37	\$37 - \$45		

Each of the above rates is quoted in Canadian Currency. Ontario sales tax — 7% not included.

WE STRONGLY URGE THAT YOU MAKE YOUR HOUSING RESERVATIONS EARLY, PARTICULARLY IF YOU PLAN TO ARRIVE ON SATURDAY. STATISTICS FROM THE TORONTO TOURIST INDUSTRY INDICATE A HEAVY INFLUX ON OCTOBER WEEKENDS.

(Please make all changes and cancellations in writing directly to the Organizing Committee).

Note: FDI business meetings and a portion of the scientific program will take place at the Royal York Hotel. The Dental Trade Show and other portions of the scientific program will take place at the Automotive Building, Exhibition Place.



If you think waiting for anesthesia onset is hard on you, think what it's like for him.

The more you had to ask "Feel anything?" the more convinced your patient got that he was going to.

So another piece of dentistry got off to a tense start.

For both of you.

And that's why Astra Canada developed Citanest Forte for routine

ASTRA

Mississauga, Ontario

dentistry. It's fast. It's effective. Yet doesn't take all morning to wear off.

Citanest Forte from Astra. In the handy Kleen Pak.

It's making dentistry a whole lot easier for patients.

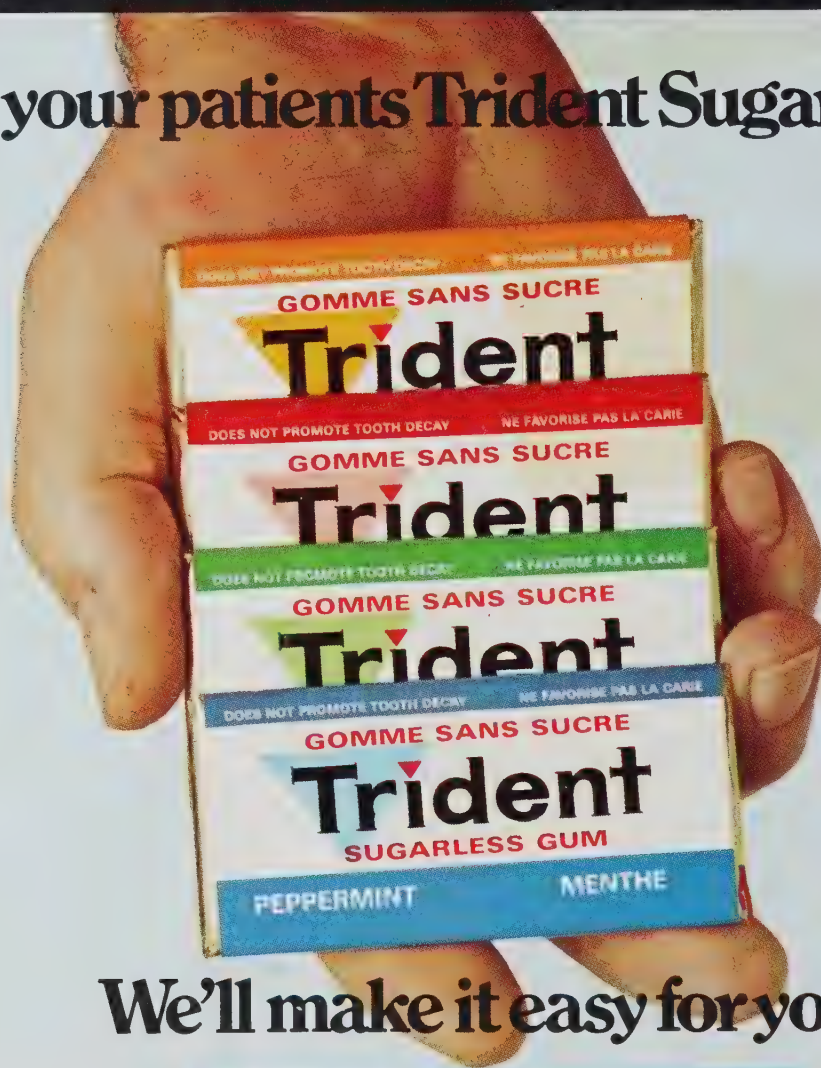
And a whole lot easier for you.



Citanest[®] FORTE

Set a good example.

Give your patients Trident Sugarless Gum.



We'll make it easy for you.

Many dentists tell us that they're handing out Trident Sugarless Gum to their patients who chew gum. Trident is sugarless, so there's no risk of sugar damage to teeth.

Dentists recommend

Please send me the standard dentist's sample order, consisting of: 2 boxes of Spearmint, 2 boxes of Peppermint, 2 boxes of Fruit, and 2 boxes of Cinnamon—a total of 8 boxes (144 packages) for \$10.00. (Ontario dentists include 70¢ Provincial Sales Tax).

Enclosed please find my cheque ☐ money order ☐ in the amount of \$_____.

Name _____

Address _____

City _____ Zone _____ Prov. _____

Send to
Trident, Box 2147, Toronto, Ontario M5W 1G8

that patients use fluoride toothpastes, brush properly and have regular dental check-ups. Now you can set a good example for your patients who chew gum. Give them Trident Sugarless Gum.

DENTAL JOURNAL DENTAIRE

Si non livrable
au destinataire
**RETOURNER A
L'EXPEDITEUR**
Port Payé

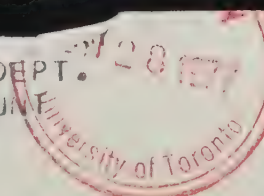
If undeliverable
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed

June/Juin 1977/Volume 43/No 6

Canadian Dental Association/Association Dentaire Canadienne

radiography
radiography
radiography
radiography
radiography
radiography
radiography
radiography

SERIALS DEPT.
TORONTO UNIV.
M5S 1A5



Q1

T

M

S^{*}

SELF THREADED PINS

MANY DESIGNS AND VARIOUS SIZES

THE
MOST RELIABLE
AND PROVEN METHOD
FOR RETENTION IN DENTIN
AND RESTORATIVE
MATERIALS



REGULAR
MINIM



REGULAR TWO IN ONE
MINIM TWO IN ONE



SELF-SHEARING



MINIKIN



AUTO
KLUTCH
DRIVE

with

MATING
AUTO KLUTCH
CHUCKS

For a
variety of
uses

TMS BENDING TOOL



Anchored pins
can be bent to
desired shape.

CLEAT



For impacted
teeth

KODE DRILLS



Color coded
for size
identification

AS ANCHORS FOR RETENTION OF AMALGAM
CORES AND COMPOSITE MATERIALS.

FOR ADDING RETENTION TO CROWNS AND
BRIDGES.

*Pat. No. 3,434,209

Available only through your dealer

designers and manufacturers of products for finer dentistry.



WHALEDENT International
Division of IPCO Hospital Supply Corp.

236 fifth avenue, new york, n.y. 10001

Demonstrated at all major conventions

Prevention between visits



Brushing and flossing. Good diet. And CREST.

The at-home contribution to preventive dentistry between professional visits.

CREST has the actual research and recognition of effectiveness.

In fact, CREST has more extensive research than any other fluoride dentifrice, and the only clinical research to prove *added* anticaries protection... over and above the protection provided by office-applied fluorides. Give your patients MORE protection... recommend clinically proven, clinically tested CREST.



"Crest has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."— Canadian Dental Association.



Leadership in research=Confidence in Crest

In the natural beauty of a daisy there is a simple logic: a harmony of form, size, color and arrangement.

The Trubyte® System uses the same logic to provide the point of departure for a beautiful denture.



Trubyte® Bioblend® Anteriors...expressing
a simple, natural logic.

TRUBYTE®

D Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1977 Dentsply International, Inc.
All rights reserved.

JOURNAL

of the Canadian Dental Association
de l'Association Dentaire Canadienne
June/Juin 1977/Volume 43/No 6

PUBLISHER/Canadian Dental Association
SCIENTIFIC EDITOR/R. S. Turnbull, DDS
EDITOR/Diane Charter
FRENCH SCIENTIFIC EDITOR/Robert Lambert, DDS

MANAGING EDITOR/ADVERTISING/Anna Spencer
EDITORIAL SECRETARY/Mary Maxwell
CLASSIFIED ADVERTISING/Marie Cosgrave
CIRCULATION/Cathy Cronin

ISSN 0382-8514

Editorial

Radiographs and third-party carriers — Ruprecht and Reid	256
--	-----

Regular Features

Announcements	254
Dentistry in the news	260
Deaths	266
Des actualités dentaires	269
DI/CDA Congress News	274

Articles

Duplication of radiographs: simple methods to be used in the dental office — Reid and Ruprecht	278
A comparison of Panorex and intraoral surveys for routine dental radiography — Stephens, et al	281
Paralleling radiographic technique without the long cone — Reid and Stephens	289

Classified advertising

293

Advertisers' index

296

Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1977 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454.

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association.

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1977 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22).

Veuillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences. Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise.

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Announcements / Avis

Canadian Dental Association

1977, Toronto, Oct. 22-28.

Fédération Dentaire Internationale 65th Annual World Dental Congress

1977, Toronto, Oct. 22-28.

FDI/CDA Congress Office:
P.O. Box 6423, Terminal A,
Toronto, Ontario M5W 1X3.

Canadian Meetings

Western Canada Dental Society, at Banff Springs Hotel, Banff, Alberta, July 3-6, 1977. Dr. D. Pedlar, Publicity Chairman, Western Canada Dental Society, 1711 - 4th St. S.W., Ste. 303, Calgary, Alberta T2S 1V8.

Canadian Association of Orthodontists, Annual Meeting, at the Hyatt Regency Hotel, Toronto, October 20-23, 1977. Dr. J. Schachter, P.O. Box 952, Saskatoon, Canada. S7K 3M4.

Canadian Academy of Restorative Dentistry, Park Plaza Hotel, Toronto, October 21-22, 1977, just prior to the FDI World Dental Congress. Dr. D. B. McAdam, Associate Professor, Department of Restorative Dentistry, University of Toronto, 124 Edward St., Toronto, M5G 1G6.

Canadian Dental Hygienists Association, Annual Meeting, Bond Hotel, Toronto, October 23-27, 1977, in conjunction with FDI World Dental Congress.

Canadian Dental Nurses and Assistants Association, Annual Meeting, Holiday Inn, Civic Square, Toronto, October 23-27, 1977, in conjunction with FDI World Dental Congress.

Canadian Society of Oral Surgeons, Annual Convention, Hyatt Regency Hotel, Toronto, October 28-31, 1977. Contact: Dr. W. Prusin, Convention Chairman, 919 Ellesmere Rd., Scarborough, Ont. M1P 2W7.

Montreal Dental Club Pre-Convention Seminar

at the Queen Elizabeth Hotel, Montreal, November 12-13, 1977. Miss M. Komarnicka, 55 LaFleur St., Ville La Salle, Que. H8R 3G7.

Montreal Dental Club Fall Clinic, at the Queen Elizabeth Hotel, Montreal, November 14-16, 1977. Miss M. Komarnicka, 55 LaFleur St., Ville La Salle, Quebec. H8R 3G7.

Les Journées Dentaires du Québec, at the Quebec Hilton Hotel, Quebec City, May 28-31, 1978. Dr. R. M. Lang, 5171 Decarie Blvd., Montreal, Que. H3W 3C2.

International Meetings

American Dental Society of Europe, Island of Rhodes, June 27 - July 2, 1977. Dr. James Molony, Secretary, 110 Harley St., London, W.1., England.

Swedish Dental Hygienists' Association, Sixth International Symposium on Dental Hygiene, at Stockholm, Sweden, June 30 - July 2, 1977. Symposium theme: plaque control. Working language: English. Eve Runsten, Secretary General, Sixth International Symposium on Dental Hygiene, % RESO Congress Service, S-105 24 Stockholm.

Third International Odontological Congress of the Brazilian Dental Association and First National and International Congress of the Odontological Services of the Armed Forces, Federal University of Rio de Janeiro, Brazil, July 15-21, 1977. Contact: Associacao Brasileira de Odontologia, Avenida 13 de Maio, 13-10 andar, conjuntos, 1001/2-5/116, Rio de Janeiro, R. J., Brazil.

Hungarian Dental Association, Twelfth Congress, at Pécs, Hungary, August 25-27, 1977. Contact: Profes-

sor I. Szabo, 7621 Pécs, Dischka Gyozo u.5. Hungary.

International Epidemiological Association, Eighth International Scientific Meeting, at Las Croabas, Puerto Rico, Sept. 18-23, 1977. Dr. Carlo Luis Gonzales, Program Secretary, Universidad de Los Andes, Facultad de Medicina, Centro de Estudios de Post-Grado, Merida-Venezuela.

International Association for Orthodontics, Annual Meeting, Bayshore Inn, Vancouver, B.C., September 21-25, 1977.

Dental Association of South Africa, Fifth International Scientific Congress, Stellenbosch, Republic of South Africa, Sept. 26-30, 1977. Contact: Dr. L. S. Maresky, Congress Secretary, P.O. Box 96, 7503 Parowvallei, C.P. South Africa.

American Academy of Periodontology, 63rd Annual Session, at the Sheraton-Boston Hotel, Boston, Massachusetts, October 5-8, 1977. The American Academy of Periodontology, 211 East Chicago Ave., Room 924, Chicago, Ill. 60611.

American Dental Association, 118th Annual Session, at Miami Beach Convention Centre, Florida, October 9-13, 1977. Contact: American Dental Association, 211 East Chicago Ave., Chicago, Ill. 60611.

Society for Clinical and Experimental Hypnosis, 29th Annual Workshops and Scientific Program, Hyatt House Hotel, Los Angeles, October 11-16, 1977. Mrs. Marion Kenn, Administrative Director, SCEH, 129A Kings Park Drive, Liverpool, New York 13088.

Fédération Dentaire Internationale, 65th Annual World Dental Congress, in Toronto, October 22-28, 1977. FDI/CDA Congress Office: P.O. Box 6423, Terminal A, Toronto, Ont. M5W 1X3.

Only Butler®

gives you a professionally
correct choice in

Dental Floss

Now you can recommend a Butler Floss
for every patient's need.



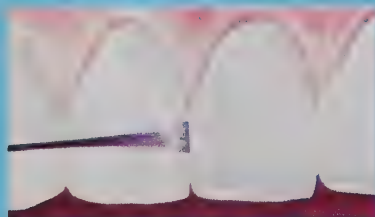
*Floss has been colored for illustration purposes.



New Tuff-Spun™ Shred Resistant Unwaxed Floss

FOR MARGINAL IRREGULARITIES

Recommended for patients with marginal or surface irregularities. This thin, multi-strand floss is made by a special process that strengthens it to help keep it from shredding between the teeth. Distinctive 50 and 100 yard packages fit pocket or purse.



Bit O'Wax® Lightly Waxed Floss

FOR TIGHT CONTACTS

There's just enough wax on this new floss to help it slip through tight spaces, so it's less likely to leave deposits. In every other way Bit O'Wax works like Butler unwaxed floss. It has the same slight "S" twist, the ability to spread and flatten like tape, and the same multiple-strand cutting edges to effectively remove plaque. Available in 50 and 100 yard packages.



Original Dr. Bass Unwaxed Floss

FOR NORMAL DENTITION

Still best for plaque removal under normal conditions. Pioneered by Dr. C.C. Bass over 30 years ago, Butler Unwaxed Floss is a thin, multi-strand floss with a slight "S" twist that flattens and spreads into hundreds of separate strands, which act as cutting edges. It gently scrapes plaque from tooth surfaces and carries it away. Available in 50, 100 and 300 yard containers.

Butler®

John O. Butler Company

IN CANADA: 6426 NOTRE DAME ST. W., MONTREAL, P.Q. H4C 1V4, CANADA

Butler dental flosses...
the professionally correct choice for every mouth condition.

Available at better drug stores everywhere.

EDITORIAL

Radiographs and Third-Party Carriers

The dental profession is dealing with an increasing number of third parties providing dental insurance as payment for treatment. Some of these companies require pre-treatment approval and others require post-treatment records to prove treatment was completed. Although dentists are not legally required to deal with these carriers, most do so because of the desire to help their patients receive due compensation, the ease of collection, or because patients are more ready to receive proper treatment if monetary considerations are decreased.

One can also understand the third party's desire to ensure that payment was for necessary treatment, and that this treatment was carried out. For this reason, models, charts and radiographs are often requested. However, the dentist must remember that the third-party carrier does not have a legal right nor the professional responsibility to dictate mode of treatment, materials used or types of records kept. The insurer does not have the right to compel the submission of any private records. This is at the discretion of the dentist. The third party does not have the right to review treatment with respect to need or quality. Any question on the part of the carrier should be referred to one of the dental profession's mediation committees. This, however, does not mean that these committees will referee every claim submitted for payment.

It is the authors' contention that the dentist has the right to know who reviews any submitted claim. He should also know the basis for any questionable decisions. The dentist always has the option to disagree, since he need not deal with the carrier at all, but rather only with the patient.

If the dentist chooses to deal with the carrier, he may still refuse any requests he feels are unreasonable or not in the patient's best interest. It should be remembered that a third-party carrier is not providing insurance coverage due to an inherent benevolence. Most provide dental payment plans to make money. This must be kept in mind in all

dealings with the company, especially those questioning the necessity and type of treatment.

Items often requested by these companies are radiographs. These may be pre-treatment radiographs (in order to determine what treatment will be provided and where) or post-treatment radiographs (in order to determine if the treatment has been provided). If the dentist feels that pre- or post-treatment films are necessary for professional reasons, he will, of course, take them. If the carrier asks for these as part of pre- or post-treatment evaluation, the dentist may submit them if he feels that the reasons for the request are valid, and that the reviewer is competent to interpret them. If, in the dentist's opinion, the reviewer's competence is questionable, it is the authors' contention that a dentist need not submit these radiographs.

Perhaps the desire for post-treatment radiographs could be satisfied by suitable pre- and post-treatment clinical photographs. Radiographs should only be taken for diagnostic purposes, and the patient should not be subjected to radiation simply to prove that the treatment has been completed. The only justifiable use of radiation is that there *must* be an expectation of diagnostic information which cannot be obtained in no other way.

If the dentist plans to take radiographs and feels that submission to the carrier is reasonable, he should submit duplicates, retaining the originals for his files. He may use a two-film packet, keeping one and submitting the other, or he may subsequently make copies. In this way, he is protected if the films are lost, and the patient is protected from excess radiation that would be required for possible replacement films.

A. Ruprecht

University of Saskatchewan

J. A. Reid

University of Western Ontario

Bristle up your patient's plaque attack

introducing **Py-co-pay[®]** **Softex 4[®]**

When a 4-row brush is
preferred for plaque control,
recommend the only 4-row
that can make these claims.

Over 3,200 bristles in
Softex 4 work to ensure extra
cleaning power, especially in the
plaque-prone sulcular region

0.007" diameter nylon
bristles offer safer, more
penetrating cleansing of
supragingival and subgingival
plaque from sulci, occlusal
bits, fissures and
interproximal surfaces

Double-rounded,
end-polished bristle tips
help protect tissues from
possible abrasion

- **compact brush head**
slimmer and more manoeuvrable
— makes it easier to clean
hard-to-reach areas of the
teeth and gingival sulci
- **smooth, rounded head
contours** not sharp or
angular — helps diminish the
danger of trauma to sensitive
tissues, especially those
opposite the buccal of the molars
- **tapered head design**
less plastic bulk — provides
immediate contact of the bristles
with teeth and gingivae

Choose the Softex that fits your patient's needs

SOFTEX JUNIOR	SOFTEX 3	SOFTEX 4
3 staggered rows 1200 bristles	3 staggered rows 2400 bristles	4 rows 3200 bristles



Professional Relations Division
Block Drug Company (Canada) Ltd.
36 Northline Rd., Toronto, Ontario M4B 3E3
"Quality Products for Dental Health"

Now there are three Dentsply®-Cavitron® Units.

They have their differences.

What they have in common is their uncommonly gentle and efficient prophylaxis.

The Dentsply®-Cavitron® **Powermatic®** Ultrasonic Dental Unit.

With fingertip on-off control
and fingertip power control.
No—repeat no—foot control!

Engineered to be the ultimate
in ultrasonics for modern dentistry.

Total solid state circuitry. Automatic fine tuning.

Fingertip control. With a flick of the finger you activate the handpiece or turn it off. Another flick and you change power from high to medium to low.

Plug-in handpiece. Smaller, lighter, perfectly balanced.

Accepts all Dentsply-Cavitron inserts.

Tested and approved. Listed by Underwriters Laboratories, Inc. and CSA Testing Laboratories.

The Dentsply®-Cavitron® **"1010"** Ultrasonic Dental Unit.

Slim, sleek, beautifully engineered
...with automatic tuning.

Total solid state construction. Automatic fine tuning. Just choose the insert you wish to use . . . the instrument is instantly and automatically at its precise best for any operation.

Automatic cord retraction and storage. Pull out as much cord as you wish to work with . . . there's a "stop" every four inches. When finished, a gentle tug returns handpiece and cord to concealed position.

Accepts all Dentsply-Cavitron inserts.

Tested and approved. Listed by Underwriters Laboratories, Inc. and CSA Testing Laboratories.

The Dentsply®-Cavitron® **"Seventy Six"™** Ultrasonic Dental Unit.

All the best of the famous "660"
plus some things that are
new, different and better.

Lighter in weight, dimensionally smaller. Total solid state construction for reliability and "instant on" readiness.

Linear frequency control for easy, one-finger tuning. High maximum power output, wide power range. Works harder or more gently, as you need it.

Sophisticated printed circuit board makes servicing easy. Foot switch energizing control.

Plug-in handpiece for easy servicing and repair in the field.

Accepts all Dentsply-Cavitron inserts.

Tested and approved. Listed by Underwriters Laboratories, Inc. and CSA Testing Laboratories.

Ask your dealer to demonstrate
how the Dentsply®-Cavitron® Units differ, and how
they are the same.

**DENTSPLY™
Equipment**

D Dentsply International, York, PA

© 1977 Dentsply International, Inc. All rights reserved. Note: "CAVITRON", "POWERMATIC" and "SEVENTY SIX" are trademarks of Cavitron Corporation.



These Dentsply-Cavitron Ultrasonic Scaling Devices are Acceptable for use in scaling and cleaning surfaces of teeth in conjunction with other suitable prophylactic measures.



FDI COMMISSIONS LOOK AT THEIR FUTURE

The Fédération Dentaire Internationale, under its new Executive Director Jan Erik Ahlberg, has started a review of most of its present activities.

This does not mean that everything is going to change, but since dentistry is changing, with regard to both its nature and delivery, there is obviously also a need for the FDI to adapt itself to new conditions and demands.

The seven standing Commissions form a very important part of the working structure of the FDI. Their need for re-organization has been recognized and debated for some years. To promote this development the Council of the FDI has, for the first time, granted the Chairmen of the Commissions, who come from countries as far distant as Australia, Canada,

Japan, New Zealand and the USA, the opportunity to meet in Copenhagen on March 26-27 to discuss their programs and functioning.

The meeting was by invitation held at the premises of The Danish Dental Association, who had offered the meeting facilities of its council to the chairmen. They were hosted by the Danish FDI delegates Dr. Bent Michaelsen and Dr. Arne Neergaard Jacobsen. The meeting was chaired by Dr. Ahlberg.

An important basis for the discussion was of course the Dental Health Policy Statement, which the FDI adopted in Athens last year. Dealing with most of the important aspects of dentistry, this document will provide many incentives for future commission activities. It was the task of the Commission Chairmen

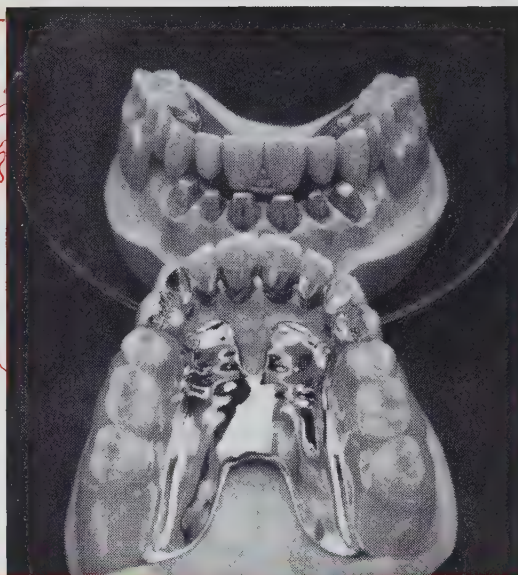
to try to give priority to those projects which shall be of the greatest assistance to the National Associations and their members and to the development of dentistry. It was also the Chairmen's aim to find the most efficient mechanisms to pursue these projects whether within the traditional commission structure or, in the longer term, in a modified framework.

They also discussed a new commission structure which aims at producing a much more effective mechanism to pursue these projects and to improve considerably the contacts between the Commissions, the Council and the General Assembly. At the same time the suggested new structure will allow for a reduction of the number of days of the annual world dental congresses.

In attendance at the March meeting of Chairmen of the FDI Commissions held in Copenhagen are, left to right: Professor Ivar Mjör, Norway (substitute the first day for Dr. J. W. Stanford, USA, Chairman, Commission on Dental Materials, Instruments, Equipment & Therapeutics), Dr. A. Cowan, Ireland (Chairman, Commission on Dental Education), Dr. Arne Neergaard Jacobsen (Danish FDI delegate), Professor G. S. Beagrie, Canada (President, International Association for Dental Research), Dr. R. Walker, England (Chairman, Ad Hoc Committee on Commission Programme and Structure), Executive Director Jan Erik Ahlberg (FDI, London), Dr. H. Thomson, England (Chairman, Commission on Dental Practice), Professor M. Onisi, Japan (Vice Chairman, Commission on Public Dental Health Services), Dr. Bent Michaelsen (Danish FDI delegate), Dr. John C. Greene, USA (Chairman, Commission on Public Dental Health Services), Professor G. N. Davies, Australia (Chairman, Commission on Classification and Statistics for Oral Conditions), Professor W. Hahn, Federal Republic of Germany (Chairman, Commission on Dental Research), Brigadier-General W. R. Thompson, Canada (Chairman, Commission on Armed Forces Dental Services).



There's a Nobilium laboratory near you



A MARI USQUE AD MARE: FROM SEA TO SEA



Wherever you practice there is a Nobilium laboratory nearby . . . ready to process your partials with the "aristocrat of chromium alloys" . . . partials that satisfy every patient desire for dependable fit, functional service, oral comfort and lifelike aesthetics. Here is the list of skilled laboratories from British Columbia to Nova Scotia equipped with the latest Nobilium equipment and materials and dedicated to serve your every requirement. Entrust your prescriptions to them with confidence.

ONTARIO — TORONTO

Duracast Dental Laboratories
8 Taber Road, Rexdale

Hirsh Dental Laboratories Limited
495 Adelaide Street West

Modent Dental Laboratory
881 Eglinton Avenue West

Pearce Dental Lab
250 Lawrence Avenue West

**The Posen & Furie
Dental Laboratories Limited**
1366 Bathurst Street

Walter Wood Dental Laboratories
527A Bloor Street West

ONTARIO — HAMILTON

**Allen & Rollaston
Dental Laboratory**
Medical Art Bldg., Hamilton 20

ONTARIO — St. CATHARINES

J. W. Birnie Dental Lab.
206 King Street

ONTARIO — CAMBRIDGE

Achmann Dental Lab.
87 Grand Ave. South

ONTARIO — ORILLIA

Orillia Dental Laboratory
225 West Street North

ONTARIO — OSHAWA

Multi-County Dental Laboratories
172 King Street East

BRITISH COLUMBIA — VANCOUVER

**Northwest Dental Laboratories
Limited**
1070 Homer Street

BRITISH COLUMBIA — VICTORIA

Turner Dental Laboratory
1207 Douglas Avenue, Suite 521

NOVA SCOTIA — AMHERST

**Walter Horton
Dental Laboratories Limited**
31 La Planche Street

ALBERTA — CALGARY

Pro-Dent Lab. Ltd.
6707 Elbow Drive S.W.

Frame Master Lab.
339 - 6th Avenue S.W.

MANITOBA — WINNIPEG

**Associated Crown & Bridge
Laboratory, Limited**
201 - 407 Graham Ave.

Manitoba Dental Labs.
333 Kennedy St.

ALBERTA — EDMONTON

Northwest Dental Laboratory
10540 - 115th Street

Universal Dental Laboratories Ltd.
10066 Jasper Avenue

New-Johnston Dental Labs.
10202 - 102 Street

SASKATCHEWAN — SASKATOON

Ceramic Dental Labs. Ltd.
304 Canada Building

QUEBEC — STE. THERISE

Lafond & Joly Dental Lab.
94 Blainville Quest

QUEBEC — GRANBY

Julien-Ste. Jean Dental Lab.
356 Rue Principale

QUEBEC — MONTREAL

Dentarium Laboratories
6997 Victoria Avenue

Nobident Dental Laboratory
3726 Jean-Talon West

Roger Sauve Dental Laboratory
5545 Beaubien Est

QUEBEC — QUEBEC CITY

G. Garneau Dental Lab.
386 Dorchester, Sud

U OF T APPOINTS NEW DEAN



Dr. Richard Ten Cate

Dr. Richard Ten Cate, professor and Chairman of the Division of Biological Sciences of the Faculty of Dentistry, has been appointed Dean of that Faculty, at the University of Toronto. He succeeds Dr. Gordon Nikiforuk, who will complete his seven-year term as Dean on June 30, 1977.

Dr. Ten Cate received his PhD in

Anatomy from the University of London in 1958, and received his BDS from the same institution in 1960. In 1968, Dr. Ten Cate joined the Faculty of Dentistry as a full professor and became Chairman of the Division of Biological Sciences within the Faculty in 1971.

He has been active in administration within the Faculty, inside the University, on the Committee on Curriculum and Standards and as Chairman of the Health Sciences Committee of the Research Board, and outside the University, serving on the Scholarship Committee of the Medical Research Council of Canada.

Dr. Ten Cate has lectured internationally on the subject of dental histology and is the co-author of several textbooks in this field. His research efforts have contributed substantially to an understanding of the biochemical and anatomical changes involved in the development of dental tissue.

MCGILL APPOINTS NEW DEAN



Dr. Kenneth Bentley

Dr. Kenneth Bentley has been appointed Dean of the Faculty of Dentistry at McGill University, effective June 1, 1977. He succeeds Dr. Ernest Ambrose who resigned recently to take up his new post as Dean of Dentistry at the University of Saskatchewan.

Dr. Bentley holds two McGill de-

grees, a DDS earned in 1958 and an MCDM awarded in 1962. He joined McGill's dental faculty in 1966 as an assistant professor in the Department of Oral Surgery, becoming chairman of that department one year later. As associate professor of oral surgery since 1967, he became director of the Division of Surgery and Oral Medicine in 1968 and director of the graduate program in 1970. In addition to his post as Dental Surgeon-in-Chief of the Montreal General Hospital he holds appointments in a number of other hospitals in the area.

The new dean has served on a number of Faculty committees, as well as provincial, national and international professional societies. He is currently past president of the Association of Canadian Faculties of Dentistry. He is the author of many medical-scientific articles and has participated in numerous dental seminars and conventions, both in Canada and the United States.

Entries invited for ADA Award Program

The American Dental Association announces that entries now are being accepted for the second annual ADA Community Preventive Dentistry Award Program.

The program, funded by the Johnson & Johnson Company, recognizes and rewards those who have created and implemented significant community preventive dentistry projects. A \$2000 award will be presented to the winner; \$300 awards may be granted for other meritorious entries.

Eligibility is not limited to dental personnel. Any individual or organization responsible for creating and implementing a community program concerned with some aspect of preventive dentistry may enter. Appropriate community activities include school programs, programs for such special population groups as the elderly or handicapped, media public information programs and private practitioners' community education programs. Preventive dentistry includes oral hygiene instruction, plaque control, uses of fluorides and sealants, relevant patient motivation and nutrition education.

Entry applications and information brochures are available from: ADA Community Preventive Dentistry Award, 211 E. Chicago Ave., Chicago, Illinois 60611. Deadline for entries is August 15, 1977.

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association Retirement Savings Plan stood as follows on April 30, 1977:

<i>Common Stock Fund</i>	\$27.757
<i>Fixed Income Fund</i>	\$19.291
<i>Guaranteed Fund</i>	\$13.570

Total assets (market value) of the plan were \$25,861,476.90.

For further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ont. M5R 2P2.



“...but
if you feel
any pain,
take one or two
N^o 222 * tablets.”

Not every patient needs an analgesic after dental care — but some do, even though you have done everything possible to avoid any patient discomfort.

When a patient is in pain, or when there is a possibility that pain will occur later, suggest N^o 222 * tablets.

222 * is a reliable analgesic — you and your patient can depend on it.

INDICATIONS: For relief of mild to moderate pain, fever and inflammation as in influenza, common cold, low back and neck pain, headache, trauma, following dental and surgical procedures.

DOSAGE: Adults — 1 or 2 tablets one to three times daily; Children's dosage, when recommended by a physician: 10 to 14 years, one tablet, one to three times daily; 5 to 10 years, one-half tablet, one to three times daily.

CONTRAINDICATIONS: Gastrointestinal ulceration and sensitivity to any of the components.

WARNINGS: Salicylates increase the effects of anticoagulants. Caution is necessary when salicylates and anticoagulants are prescribed concurrently. Also, salicylates may depress the concentration of prothrombin in the plasma. Large doses of salicylates may affect insulin requirements of diabetics. Salicylates may potentiate sulfonylurea hypoglycemic agents. Analgesic abuse (excessive and prolonged therapy) has been associated with nephropathy. TO AVOID

ACCIDENTAL POISONING ACETYLSALICYLIC ACID PREPARATIONS MUST BE KEPT WELL OUT OF REACH OF CHILDREN.

PRECAUTIONS: Give with caution to patients with asthma, other allergic conditions, bleeding tendencies, or hypoprothrombinemia. Salicylates can produce changes in thyroid function tests.

Observe care in use of codeine, although tolerance and addiction are rare. Give codeine with caution to patients with severe respiratory depression. Its depressant effect may be enhanced by concurrent administration of sedatives and tranquilizers.

ADVERSE REACTIONS: Acetylsalicylic acid: *Gastrointestinal:* dyspepsia, heartburn, nausea, vomiting, diarrhea, gastrointestinal ulceration and bleeding. *Ear reactions:* tinnitus, hearing loss. *Hematologic:* anemia, leukopenia, thrombocytopenia, purpura. *Dermatologic and Hypersensitivity:* urticaria, angioedema, pruritus, various skin eruptions, asthma and anaphylaxis. *Miscellaneous:* mental confusion, drowsiness, sweating and thirst.

Codeine: Average or large doses may cause various gastrointestinal symptoms such as nausea, vomiting and constipation.

Caffeine: May cause nausea, nervousness, insomnia, headache, vomiting, palpitation, vertigo, muscle tremor, sensory disturbances, excessive diuresis in sensitive patients. Large doses may cause gastric ulceration.

FULL INFORMATION AVAILABLE ON REQUEST

HOW SUPPLIED

N^o 222* Tablets — White, scored, engraved 222 on one side. Each tablet contains: acetylsalicylic acid 375 mg, caffeine citrate 30 mg, codeine phosphate 8 mg. Available in tubes of 12; bottles of 40 and 100; also bottles of 60 with safety cap.

*Trademark



(MC-390a)

Frosst

FOUNDED IN CANADA IN 1899
CHARLES E. FROSST & CO
KIRKLAND (MONTREAL) CANADA

A UNIQUE WHITE SHIFTS. AND WHAT

Sharp, diagnostic images. Isn't that what radiography is all about? That is what Panorex is all about. It delivers clear images that are diagnostically viable. And it does so even under adverse conditions that might otherwise cause fuzzy results.

The things that go wrong. You know how patients' dental arches vary. Or may be asymmetrical. Which can mean blurred images and poor detail, because some teeth are not in the area of sharpest focus, the focal trough.

Greater clarity from a deep focal trough. As shown, the Panorex® focal trough is uniformly deep, deep enough to "forgive" conditions that produce fuzzy radiographs. As a result, Panorex radiographs are sharp, full of diagnostically valuable detail.

But why the white band and shifting chair? Both help Panorex achieve its primary purpose—to take sharper, clearer radiographs. In Panorex radiography, the patient's head remains fixed while the film and X-ray source re-

volve around it. As shown in the diagram, the right side of the dental arch is radiographed as the tube head rotates around a pivot point located behind the left molar area.

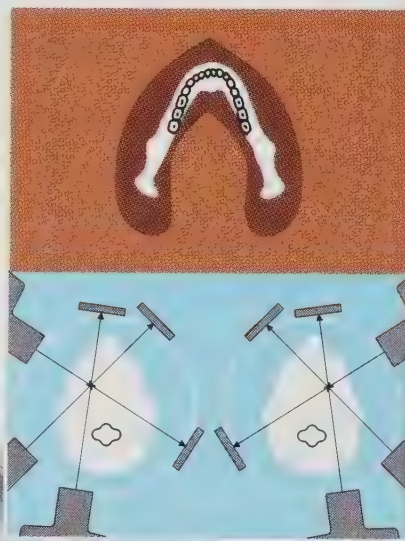
As the X-ray head approaches the spine, the beam is automatically shut off. The X-ray head then passes behind the spine, and the chair shifts gently to the left.

- The chair shifts to establish a new pivot point behind the right molar area.
- The white band occurs during the moments the X-ray beam is off and the chair is shifting.

The beam is then automatically turned on again to radiograph the left side of the dental arch.

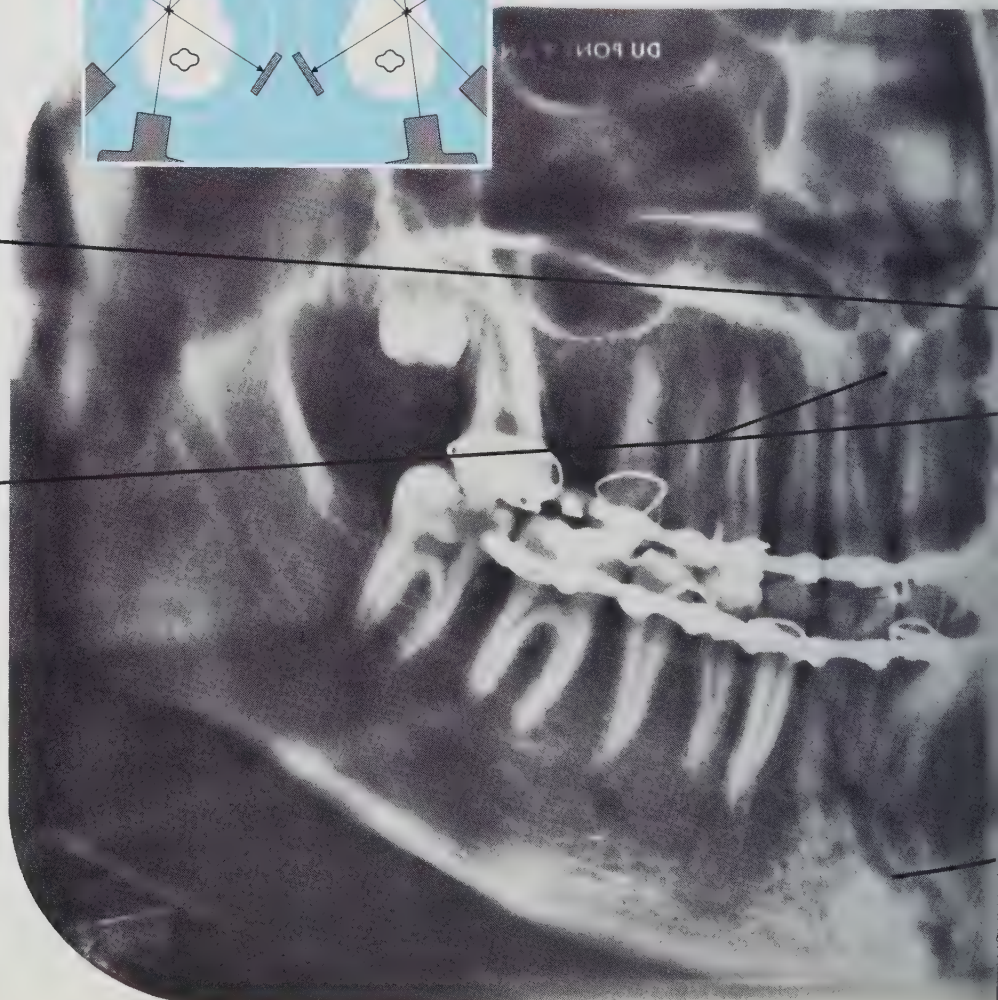
The benefits of all this:

- Greater clarity and detail.
- No direct radiation through the spine, Panorex exclusive.
- Two views of the centrals. Note duplication of the central and lateral incisors.



Exclusive white band indicates a genuine Panorex radiograph, assuring you that when an exposure is made, there is a deep and uniform focal trough for maximum clarity.

Is it lingual or labial? An impacted tooth, cyst, or foreign object in the anterior area can be localized by analyzing the Panorex double view of the centrals. Only Panorex provides a double view of the centrals on a single radiograph.*



BAND. A CHAIR THAT TALL MEANS.

No shadows from teeth in the opposite arch.
No spinal shadow over the centrals.
Constant image magnification, because the distance from the X-ray pivot point to each tooth is practically the same.
That is why the pivot points are located where they are—to keep all teeth in the same plane so that they appear in correct relative size and shape—both horizontally and vertically.

Value of two views. Two views—another Panorex exclusive—can help determine if an impacted tooth is labial or lingual, or help locate a cyst.

Less time, less radiation. A Panorex radiograph takes 1½ minutes, patient-to-patient. The amount of radiation received by the patient is much less than a full mouth 18 film periapical examination. And there's no film in the mouth.

Easy, fast preparation. Just seat a patient comfortably, set the tube head height, adjust the

head positioner, and take the radiograph. Your assistant can do it all in moments.

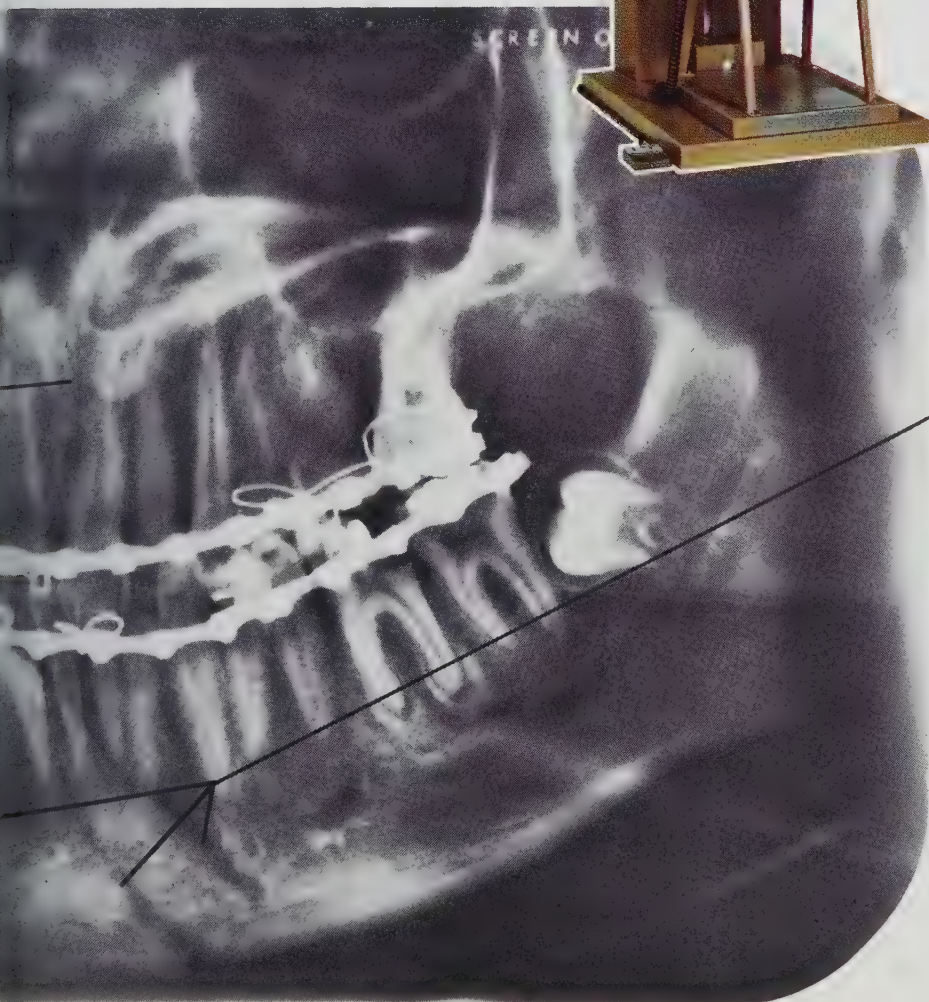
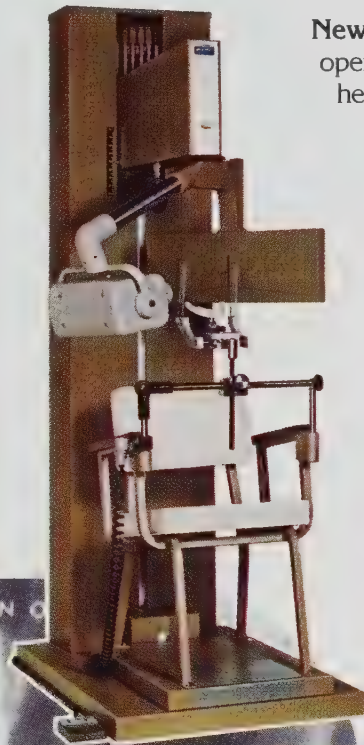
Wheel chair adapter available. The adapter installs easily on new or existing units, shifts like the standard chair, and stores neatly out of the way when not in use.

New auxiliary control panel. This permits the operation of up to three additional arms and heads.

Warranty. A full 2 years.

Last, and perhaps best: price. Contact your local full service dealer and compare.

Take a longer look. Your S. S. White representative has independent data that shows how a deep focal trough helps Panorex take superior radiographs to aid your diagnosis. It's worth looking into! S. S. White Dental Products International, Philadelphia, Pa. 19102



Single or compound fracture? Note how an apparent single fracture (left) is really a compound fracture (right). The exclusive Panorex double view of the anterior area reveals fracture lines that could otherwise be concealed by bony anatomy.

S.S. WHITE
 **PENN WALT**
HEALTH PRODUCTS
CHEMICALS ■ EQUIPMENT

PANOREX®
SUPERIOR
RADIOGRAPHS.

SASKATCHEWAN APPOINTS NEW DEAN



Dr. Ernest Ambrose

Dr. Ernest R. Ambrose has been appointed to a five-year term as Dean of the College of Dentistry at the University of Saskatchewan, effective July 1, 1977. Dr. Ambrose was previously Dean of Dentistry at McGill University.

He will succeed Dean C. W. McPhail, who is relinquishing the administrative post to return to teaching and research.

Dr. Ambrose has been at McGill since 1950, when he became a part-

time teacher in the dental faculty while engaged in private practice. He accepted a full-time appointment in 1958, when he was named Chairman of the Department of Operative Dentistry. He was appointed Director of the Division of Restorative Dentistry in 1966 and Dean of the Faculty of Dentistry in 1970.

On the clinical side, he has been senior dental surgeon at Montreal General Hospital and a consultant at three other hospitals.

He has served on the Canadian Dental Association's Council on Education and Dental Aptitude Test Committee and on the National Dental Examining Board. He has also been a consultant in restorative dentistry to the Royal Canadian Dental Corps.

Last year, Dr. Ambrose chaired a survey team that reviewed the quality of selected services performed by dental nurses under the Saskatchewan Dental Plan. He has participated in similar surveys of dental hygienists in Ontario and Prince Edward Island.

He was born in Montreal and received his dental education at McGill.

Niagara Chapter, Academy of General Dentistry

The Niagara Chapter of the Academy of General Dentistry held its annual continuing education program at the Holiday Inn in Barrie, Ontario, February 13-16, 1977.

Lieutenant Colonel Noel H. Andrews, Chief Instructor at the Canadian Forces Dental Services School, Base Borden, presented the four-day course on "Periodontics in General Practice". Dr. Eric Cragg presented a three-hour session on "Prosthodontics and the Periodontium — Biomechanical Principles of Partial Denture Design".

Major J. D. McCallum spoke on the battered child and legal responsibilities of the dentist. Major W. Budzinski presented a lecture on endodontic anatomical anomalies, Major E. D. Cragg spoke on overdentures and Major Keith Morley covered interceptive orthodontics.

The afternoon and evening of February 15 were spent at Base Borden where chapter members toured the CFDS facilities and were treated to cocktails and a gourmet dinner in the Officers' Mess.

DEATHS

Adamec, Albert, 41. Winnipeg, Manitoba. Faculty of Medicine, Bratislava, Czechoslovakia, 1964. 17-4-77. Survived by Milos (son).

Honey, Morley, 82. Thornhill, Ontario. University of Toronto, 1923. 25-4-77. Survived by Margaret (wife) and Morey Cairine McColl (daughter).

Provencher, Henri, 82. Rivière du Loup, Témiscouata, Quebec. University of Montreal, 1920. 13-4-77.

Ryan, John Thomas, 61. Calgary, Alberta. University of Toronto, 1945. 8-3-77. Survived by Edmona (wife), Paul, Jay, Michael, David (sons) and Jane (daughter).

Sproul, Frank E., 78. Newcastle, New Brunswick. Royal College of Dental Surgeons. 22-4-77. Survived by Margaret (wife), a son and two daughters.

NO TRUTH TO FLUORIDE-CANCER LINK

Dr. R. M. Taylor, Executive Director of the National Cancer Institute of Canada, entirely rejects the recent claim made by a retired U.S. biochemist that fluoridated water causes cancer.

During the 1977 Easter weekend, Dr. Dean Burke, former head of the National Cancer Institute's Cyto Chemistry Section in Washington, told a convention of the Consumer Health Organization of Canada that fluoride added to drinking water results in one-tenth of all cancer deaths in the United States each year.

Dr. Taylor states: "Dr. Burk is not qualified as an epidemiologist nor as an expert in the field of human cancer. His expertise in both these areas has been rejected by successive directors of the National Cancer Institute.

"If Dr. Burk feels he has new

evidence in this area there is a way of bringing it to attention — publish it. Either he has not published it or else it has been rejected.

"Beyond a shadow of a doubt, fluoride does *not* cause cancer! I reject entirely Dr. Burk's claims to any such effect. He is a well known figure and has made unqualified statements about supposed remedies for cancer in other areas. He is a controversial person. I do not accept his expertise in any way.

"I consider him unqualified to make the statements he has been making. There is no harm in fluoride as used in the fluoridation of water supplies."

In addition to Dr. Taylor, many other representatives in the fields of medicine and dentistry across Canada went on record as strongly opposing Dr. Burk's claim.

EFFICACY



ECONOMY

ISOCAINE

brand of

MEPIVACAINE HCl

ISOCAINE
(mepivacaine) HCl

Isocaine HCl brand of mepivacaine HCl gives you a choice of two different concentrations to meet the specific anesthetic requirements of varying dental procedures and patient needs. With either formulation, Isocaine assures fast onset, deep anesthesia and dependable efficacy. Economically priced to the profession, Novocol's brand of mepivacaine is available through select dental dealers.

Isocaine HCl 3%
Isocaine HCl 2%
with levonordefrin
1:20,000

Isocaine HCl 3% may be used with confidence for procedures of short to average duration and when vasoconstriction is contraindicated. For longer procedures and those requiring a vasoconstrictor, Isocaine HCl 2% with levonordefrin 1:20,000 is suggested. Complete product information is packaged with each formulation. Efficacy and economy are yours in dependable dental anesthetics when you specify Isocaine brand of mepivacaine.



NOVOCOL

Chemical Mfg. Co
Of Canada, Ltd
52 Chauncey Ave
Toronto M8Z 2Z4, Ontario



Son traitement au fluorure est terminé. Laissez le fluorure de Colgate prendre la relève.

Le fluorure MFP* de Colgate* donne à vos clients une protection supplémentaire contre la carie, entre deux traitements.

C'est un fait. Nos tests cliniques ont prouvé que l'emploi **seul** de Colgate au fluorure MFP réduisait considérablement le taux de caries nouvelles. Dans le cadre d'un traitement local, il devrait donc entraîner une réduction encore plus notable.

Colgate au MFP présente des avantages spécifiques et importants:

1. L'usage régulier de Colgate rend les dents plus résistantes à la carie. Nous croyons que le MFP

(monofluorophosphate de sodium) contenu dans Colgate parvient à transformer la couche d'apatite qui recouvre les dents, en fluorapatite (un fluorophosphate de calcium), grâce à la similarité de propriétés chimiques de ces deux substances.

2. Tandis que certains dentifrices ont tendance à tacher les dents, il est bon de savoir que Colgate avec MFP ne présente pas ce problème.

3. Colgate au MFP est reconnu la stabilité de son fluorure; même après trois ans, le monofluorophosphate de sodium reste présent et efficace.

Aussi, dès que vous aurez terminé leur traitement au fluorure, parlez vos clients de cette protection supplémentaire que leur apporte le dentifrice Colgate au MFP. Donnez-leur une chance de plus à lutter contre la carie.



"Colgate avec MFP s'est révélé un dentifrice préventif contre la carie dentaire et son emploi peut avoir une valeur importante lorsqu'on l'utilise dans le cadre d'un programme d'hygiène buccale exécuté avec application et de soins dentaires professionnels réguliers."

L'Association Dentaire Canadienne

*TM Reg'd.

Colgate-Palmolive Co.

LES ADMINISTRATEURS DES ASSOCIATIONS DENTAIRES CANADIENNES ET AMÉRICAINES SE REUNISSENT A OTTAWA POUR DISCUTER DES PROBLEMES COMMUNS

Les administrateurs supérieurs des Associations dentaires canadienne et américaine se sont réunis à Ottawa les 11 et 12 mars pour s'entretenir de leurs problèmes communs et explorer diverses possibilités de s'entraider.

Le Dr Michael J. Cipton, président de l'Association dentaire canadienne présidait cette séance. Les membres suivants du Conseil exécutif de l'ADC participaient aux réunions: les Drs D. L. Rife de Toronto, président élu; H. L. Mussells de Westmount, Québec, ancien président; R. L. Morant de Toronto; C. Dexter d'Halifax; H. A. Gray de Medicine Hat, Alberta; et Clyde Covit de Montréal, président du Conseil d'administration de l'Association des chirurgiens-dentistes du Québec; ainsi que M. Lloyd A. Stevenson, directeur exécutif de l'ADC.

Le Dr Frank F. Shuler, président de

l'American Dental Association dirigeait la délégation américaine composée de huit membres du "Board of Trustees Committee on Inter-Agency Affairs" et de trois membres du personnel de l'ADA. Les membres du Comité comprenaient les Drs Frank P. Bowyer, président élu de l'ADA; George P. Boucek; Joseph P. Cappuccio; Floyd E. Dewhirst; John M. Faust; et C. Gordon Watson, directeur exécutif de l'ADA. Les membres du personnel de l'ADA étaient les suivants: M. Bernard J. Conway, directeur exécutif-adjoint, Affaires législatives et juridiques; Eric

M. Bishop, directeur exécutif-adjoint, Santé dentaire; et Mme Lois L. Schuhrke, directrice, division de l'éducation permanente.

L'exercice illégal de la profession dentaire se plaçait en tête de file des problèmes communs que les adminis-

trateurs de l'ADC ont discuté avec leurs collègues américains. Il se sont également entretenus de nombreuses autres questions, notamment de services de santé publique; de régimes prépayés; de systèmes d'évaluation par les pairs; d'organismes de services de la santé; d'éducation permanente; d'accréditation; de programmes d'éducation publique de l'ADA; de communication professionnelle; d'action politique; ainsi que du 65^{ème} Congrès dentaire mondial annuel de la Fédération dentaire internationale, qui aura lieu à Toronto du 22 au 28 octobre 1977.

La conférence coïncidait à l'inauguration officielle du nouveau siège social de l'ADC à Ottawa. Lors des cérémonies d'inauguration, le Dr Frank Shuler, président de l'ADA, a présenté à l'ADC au nom de cette organisme, ses salutations ainsi qu'un cadeau commémoratif.

L'ASSOCIATION DENTAIRE CANADIENNE REAGIT VIS-A-VIS DE LA PROSCRIPTION DE LA SACCHARINE PAR LE GOUVERNEMENT

Le communiqué de presse suivant, préparé par le Dr Alexander E. MacLeod, président du Conseil sur les services d'information de l'Association dentaire canadienne, a été publié immédiatement après la déclaration de Monsieur Marc Lalonde, ministre de la Santé, proclamant que la saccharine serait proscrite au Canada:

"L'Association dentaire canadienne s'inquiète des conséquences de la déclaration soudaine faite par M. Lalonde, qu'il proscrie l'emploi de la saccharine au Canada. Si l'on utilise du sucre raffiné à titre de substitut de la saccharine, la carie dentaire se développera sans aucun doute. Ceci retarde-

rait de nombreuses années les efforts faits par les dentistes canadiens en vue de prévenir les débuts de carie, sans parler des coûts supplémentaires occasionnés par le traitement de maladies dentaires, aussi bien pour le public que pour le gouvernement.

La proscription aurait également de graves conséquences sur les dentifrices et certains rinse-bouche qui contiennent de petites quantités de saccharine pour les rendre agréables. Nous ne connaissons à présent aucun substitut éprouvé de la saccharine. Les dentifrices sans saccharine seraient si amers que personne ne s'en servirait.

"Nous suggérons que le Comité sur

les thérapeutiques de l'ADC et les fonctionnaires du gouvernement s'entretiennent avec les représentants de l'industrie pharmaceutique dans le but de trouver une solution qui servira au mieux les intérêts du public."

ERRATUM

Dans le numéro de mars 1977, le Journal rapporte le décès du Dr. Jacques Marchand. On voudra préciser qu'il s'agit du confrère ayant gradué en 1953 et non du Dr. Jacques Marchand — gradué en 1938 — pratiquant au 5836 de la rue Sherbrooke à Montréal.

VOTRE ADHESION A LA PROFESSION

L'Association des chirurgiens dentistes du Québec a envoyé la lettre suivante aux dentistes du Québec en mars dernier.

Tout dentiste a le droit d'exprimer son opinion et de se prévaloir des services offerts par les organismes créés pour protéger ses intérêts au sein de sa profession.

En ce sens, votre propre position est en DANGER. Les vues des dentistes du Québec en ce qui a trait

- aux plans d'assurances pour les dentistes,
- à l'uniformisation des politiques et des formulaires d'assurances dentaires,
- à l'accréditation des auxiliaires,

— aux standards de l'éducation permanente,

— aux taxes imposées sur les matériaux et les équipements dentaires, de même qu'à beaucoup d'autres points de vue déterminants pour votre pratique, ne seront pas défendues au niveau national, c'est-à-dire au Bureau des Gouverneurs de l'Association Dentaire Canadienne, par un nombre suffisant de représentants du Québec, à moins que vous-même et quelque 200 autres dentistes ne se joignent au nombre important de ceux qui ont déjà concrétisé leur adhésion à l'A.D.C.

Par le passé, l'A.D.C. s'est dévouée sans discrimination pour les non-membres autant que pour ses membres. Mais cette attitude impartiale sera désormais abandonnée et vous risquez

d'en être personnellement affecté: les services dont vous bénéficiez présentement de l'A.D.C. ne vous seront plus accessibles à moins que vous n'adoptiez une attitude positive en signant votre adhésion et en faisant parvenir votre chèque dès maintenant.

Vous ne serez plus sollicité après aujourd'hui. *Réveillez-vous et joignez-vous à nous.*

Les représentants du Québec ont besoin de votre appui pour faire le poids dans la balance des décisions prises au niveau national et défendre efficacement les intérêts des dentistes de cette province dans tous les domaines affectant notre profession.

*Clyde Covit, DDS,
Président du Conseil d'administration*

ADHESION A L'ADC

Il est inévitable que les politiques de la province de Québec puissent, à court ou à long terme, se refléter dans bien des aspects de la vie canadienne et les courants d'idées qui pénètrent dans la vie individuelle peuvent engendrer des réactions souvent imprévisibles.

Il serait regrettable, sinon désastreux, que les dentistes du Québec se laissent entraîner par nonchalance, indifférence ou par principe nationaliste, au sein des seules ressources francophones. La science comme les arts n'ont pas de frontières justement parce que leurs objectifs sont et doivent être universelles, pour favoriser leur épanouissement et pour le bénéfice des individus en général.

Les dangers d'un isolement scientifique naissent avec la difficulté de communication et c'est pourquoi il faut que les dentistes francophones s'élèvent contre les mesures qui, comme l'unilinguisme, tendent à faire croire que la science dentaire peut se passer d'un contexte anglophone. Les étudiants et les praticiens francophones n'en sont pas encore rendus à

pouvoir se passer des volumes anglais, pas plus qu'ils peuvent espérer la spécialisation disciplinaire sans l'évident besoin de pouvoir communiquer avec les facultés anglaises.

Or, pour nous du Québec, une étroite liaison scientifique passe par l'Association Dentaire Canadienne et c'est pourquoi il faut prendre les moyens pour l'enrichir davantage par une plus importante adhésion. La représentation de l'élément du Québec, à l'A.D.C., sera d'autant plus importante qu'on y sentira, une présence massive.

L'Ordre des dentistes du Québec, les présidents de nos diverses sociétés doivent tenter un effort additionnel pour inciter les confrères à bien réaliser les propos qui ont été mentionnés dans les récents communiqués de l'A.D.C.Q. Sans vouloir les redire, on peut en conclure néanmoins que nous avons tout à gagner en suivant le voie que nous propose notre association syndicale.

Nous profitons de l'occasion pour réitérer l'invitation que nous avons déjà

faite pour une plus grande participation scientifique au journal de l'A.D.C.

Il est évident que plusieurs dentistes francophones écrivent sur des sujets scientifiques, ou d'intérêt général. Nous les invitons à publier leurs travaux dans le journal, avec la conviction que nous pouvons apporter une présence valable dans le monde de la dentisterie. Notre propre valorisation se fera plus efficacement si nous agissons par nos moyens disponibles plutôt que de tenter de prouver une valeur à l'intérieur d'un cercle plus restreint.

Le journal de l'A.D.C. trouve tout le matériel de publication nécessaire, chez nos confrères anglophones et il leur accorde une place importante. La section française n'est pas négligée du fait qu'on pratique une forme de racisme mais plutôt parce que les dentistes francophones ne soumettent pas les manuscrits qui existent sûrement et ce serait pourtant là une excellente façon de s'insérer dans la vie professionnelle.

Dr. Robert Lambert

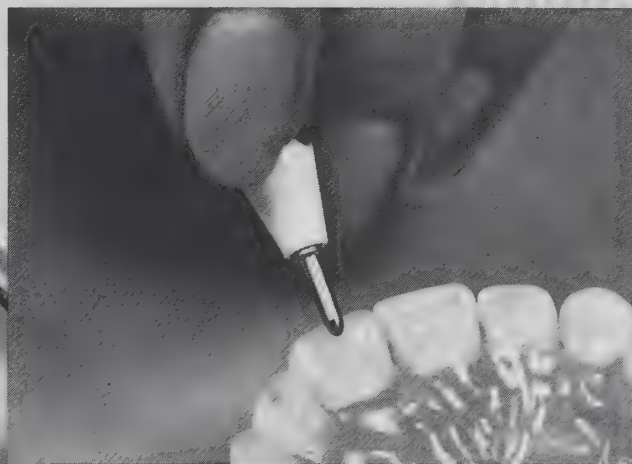
**C'est ici
que tout
nouveau dentier
doit faire
ses preuves.**

Cherchez le croissant.

Demandez à votre assistante d'examiner les
linguales antérieures. Si ce sont des dents
TRUBYTE®, elle verra une petite marque en
forme de croissant.

Si elle ne trouve pas le croissant,
le dentier ne comprend pas de
dents Trubyte.

Quand vous payez pour
avoir ce qu'il y a de
mieux, vous devez
obtenir ce qu'il
y a de mieux.



TRUBYTE®

*Créateur de d'excellents produits
pour l'art dentaire.*

D™ Dentsply Canada Ltd.

© 1976 Dentsply International, Inc.
Tous droits réservés

Le croissant est une marque déposée de Dentsply International Inc. York, PA

Cherchez le croissant (☾) sur ces marques populaires Trubyte®

ANTERIEURES▶

Bioblend®

Bioform®

Biotone®

New Hue® V.F.

L'ADC NOMME LE NOUVEAU PRESIDENT DU CONSEIL SUR LES SERVICES D'INFORMATION

Le Conseil d'administration de l'Association dentaire canadienne annonce la nomination du Dr Alexander E. MacLeod d'Halifax au poste de président du Conseil sur les Services d'information. Le Dr MacLeod succède au Dr Brad Chapple de Port Hope, Ontario,

qui vient de démissionner mais siégera quand même à titre de membre du Conseil.

Fils de dentiste, le Dr McLeod a fait ses études aux Universités de Glasgow, Dalhousie et Harvard. Il fait partie du personnel de la Faculté dentaire de

Dalhousie, où il enseigne les sciences des communications et l'administration de cabinets dentaires. Il a créé le Groupe dentaire Medical Arts, dentistes associés à Halifax et y exerce à temps partiel la dentisterie générale.

Il a participé à divers programmes à la radio et à la télévision, et a alors expliqué au public les besoins dentaires spéciaux qu'éprouvent les personnes handicapées et âgées en Nouvelle-Écosse.

DES PERFORMANCES

Avec les "livraisons lentes" et les "commandes en attente", votre fournisseur de produits dentaires, vous fait-il tourner en rond?

De nos jours, les dentistes avisés font appel à des fournisseurs comme Denco, qui assurent un service rapide et des performances impressionnantes en ce qui concerne la livraison rapide des produits nécessaires. Grâce à l'efficacité accrue des systèmes de communication, de contrôle du stock et de livraison chez Denco, une commande que vous passez peut être expédiée le même jour . . . même s'il s'agit d'offres spéciales.

L'an dernier, Denco a rempli plus de 11,000 commandes d'offres spéciales à l'intention des dentistes dans tout le Canada. Cette année, nous avons ajouté 300 de ces "offres spéciales" à notre gamme ordinaire.

Lorsqu'il s'agit de vous aider à assurer le bon fonctionnement de votre cabinet dentaire . . . chez Denco, nous ne tournons pas autour du pot.

DENCO



La revue des hygiénistes dentaires gagne un prix

"L'Hygiéniste dentaire du Canada," publication officielle de l'Association des hygiénistes dentaires canadienne vient d'obtenir une mention honorable pour la catégorie de la "Plume d'Or" (Golden Pen), concours de journalisme 1977, Collège international des dentistes.

Les prix et mentions honorables ont été présentés par le Dr James J. Focca, président du Collège international des dentistes, Division des É.-U., au cours de la conférence de journalisme de l'ADA qui a eu lieu en mars à Portland, Oregon.

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 30 avril, 1977:

<i>Fonds d'actions</i>	
<i>ordinaires</i>	\$27.757
<i>Fonds à revenu fixe</i>	\$19.291
<i>Fonds avec garantie</i>	\$13.570

L'avoir total (valeur marchande) du régime se montait à \$25,861,476.90.

Pour de plus amples renseignements, veuillez écrire à CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ont. M5R 2P2.

L'AMERICAN DENTAL ASSOCIATION EXPRIME DE VIVES INQUIETUDES EN CE QUI CONCERNE LA PROSCRIPTION DE LA SACCHARINE PAR LA FDA

L'American Dental Association a exprimé de vives inquiétudes en ce qui concerne la proposition du Food and Drug Administration à l'égard de la proscription de la saccharine, seul produit édulcorant artificiel autorisé à être vendu aux États-Unis.

L'indignation publique soulevée par cette proscription a mené à une enquête immédiate effectuée par le "House Subcommittee on Public Health" (sous-comité de la Chambre sur la santé publique) les 21 et 22 mars, sur ce que l'on nomme l'Amendement Delaney.

L'Amendement Delaney apparemment oblige la FDA à proscrire tous les agents pouvant provoquer le cancer lorsqu'ils sont ingérés par les humains ou les animaux... quelqu'en soit la dose. Or la FDA a récemment proposé la proscription de la saccharine parce que des tests effectués au Canada ont prouvé que d'importantes doses de saccharine provoquaient le cancer chez les rats.

Lors d'une déclaration au sous-comité, l'Association déclarait que

l'Amendement Delaney "est trop restrictif et devrait être modifié par la substitution de règlements moins restrictifs et plus judicieux qui tiennent compte des faits réels et font face aux besoins des humains.

"L'application de cette amendement semble fort douteux et lamentablement inapproprié, puisque depuis 80 ans que les humains utilisent ce produit, l'on n'est jamais arrivé à établir un rapport cause/effet entre la saccharine et le cancer.

"De plus, l'on ne semble pas tenir compte des doses massives employées lors de l'étude sur les animaux, en regard de l'estimation d'ingestion actuelle de saccharine par les humains."

La déclaration de l'Association soulignait que la commercialisation de confiseries sans sucre provenait partiellement des efforts faits par la profession dentaire en vue de diminuer l'ingestion de sucre par les enfants. Les dentistes sont au courant depuis longtemps de la considérable évidence scientifique liant l'ingestion fréquente de sucreries à la carie dentaire.

Voilà pourquoi, souligne l'ADA, le fait de pouvoir acheter un produit édulcorant qui n'est pas du sucre, pour s'en servir avec des aliments des boissons et des médicaments qui ne stimulent pas la carie dentaire est de première importance en regard de la santé dentaire de ce pays.

En outre, les produits édulcorants artificiels sont également importants pour l'industrie des produits pharmaceutiques utilisés couramment, et notamment les dentifrices, les préparations fluorées et les vitamines pour enfants, ajoute l'ADA. L'emploi de sucre pour ces produits contribuerait certainement à la carie dentaire.

L'Institut national du cancer figure parmi les nombreux organismes de la santé qui mettent en doute la proscription de la saccharine. Le Dr Guy Newell, directeur par interim de l'Institut a fait une déposition au sous-comité, déclarant que: "Sur la base des données humaines, l'Institut n'estime pas que la saccharine soit un produit cancérigène pour les humains."

UNE CAMERA QUI DECOUVRE LES CARIES DENTAIRES DEUX ANS AVANT QU'ELLES NE SOIENT VISIBLES

Un chercheur du domaine dentaire a mis au point une caméra à rayons ultraviolets, qui peut découvrir les caries dentaires deux ans avant qu'elles ne deviennent visibles.

Selon le Dr John Gwinnett, professeur agrégé au département de biologie buccale et médicale à la State University à Stonybrook, New York, cet appareil a été développé par le Dr Israel Kleinberg, chef de ce même département (le Dr Kleinberg travaillait autrefois à l'Université du Manitoba). Le Dr Gwinnett, anciennement chercheur à l'University of Western Ontario, a déclaré que la caméra à rayons ultraviolets peut découvrir tellement tôt une

carie, qu'il est possible d'arrêter le processus grâce à l'application de mesures appropriées.

Le Dr Gwinnett était à London, Ontario, pour parler de la caméra lors d'une conférence de l'Association internationale sur la recherche dentaire.

Les recherches ayant trait à cette caméra n'en sont qu'aux stades d'expérimentation, a-t-il dit, mais il a déjà été démontré qu'elle peut découvrir la plaque dentaire qui reste, même après le nettoyage le plus minutieux effectué par une hygiéniste dentaire. Il a ajouté que la plaque forme des dépôts selon une configuration prévisible pour chaque individu, "presque comme des

empreintes digitales".

La caméra à rayons ultraviolets ne remplacerait pas la radiographie car cette dernière sert quand même à examiner des zones que la caméra ne voit pas, mais elle pourrait découvrir très tôt des caries et situer des organismes qui ont le potentiel d'occasionner des maladies.

Ces zones de carie découverts à leur tout début peuvent être traitées à l'aide de dentifrice concentré ou de fluorure et grâce à la technique à rayons ultraviolets, l'on peut également faire voir aux patients si la manière dont ils se nettoient les dents est efficace, a ajouté le Dr Gwinnett.

TORONTO: RICH IN HISTORY AND TRADITION

Visitors to the 65th Annual World Dental Congress of the Fédération Dentaire Internationale, to be held in conjunction with the 1977 National Convention of the Canadian Dental Association, will find Toronto offers many historical sites, rich in tradition. Photo at right shows the interior of the dining room of Mackenzie House; photo below shows the exterior of Colborne Lodge.



FDI Congress includes full military program

The Armed Forces Dental Services Commission will be arranging field visits to military dental installations and sponsoring military conferences during the FDI/CDA Toronto Congress.

On Monday, October 24, the Military Conference will be open to all Congress delegates. The theme for this session will be "Continuing Education in the Canadian Forces Dental Services".

Dental Corps reunion

The Royal Canadian Dental Corps reunion will be held Tuesday, October 25, 1977, at the Hotel Toronto from 4:00 pm to 6:00 pm.

Theatre tickets

During the World Dental Congress, Toronto's famous Royal Alexandra Theatre will be presenting Peter O'Toole starring in *Uncle Vanya* by Chekhov.

The Ladies' Committee has been fortunate in securing tickets for the matinee performance on Wednesday, October 26. These tickets will be on sale in the registration area during the Congress.

Official Carriers and Tour Agent

The Congress Organizing Committee is pleased to announce the appointments of Air Canada and CP Air as "Official Carriers" and Lawson McKay Tours as "Official Tour Agent" for the 65th Annual World Dental Congress of the Fédération Dentaire Internationale to be held in Toronto, October 22-28, 1977.



The Extraoral Film Story in Panoramic Black and White.

Extraoral radiography used in conjunction with intraoral radiography tells the whole story.

After you've made periapical, or interproximal, or occlusal X-ray studies of your patient, you may find that in addition, you need a broader scope of information for your diagnosis.

You get it with extraoral radiography—in examinations of the mandible and the maxilla that call for a panoramic view of the oral structures on a single radiograph.

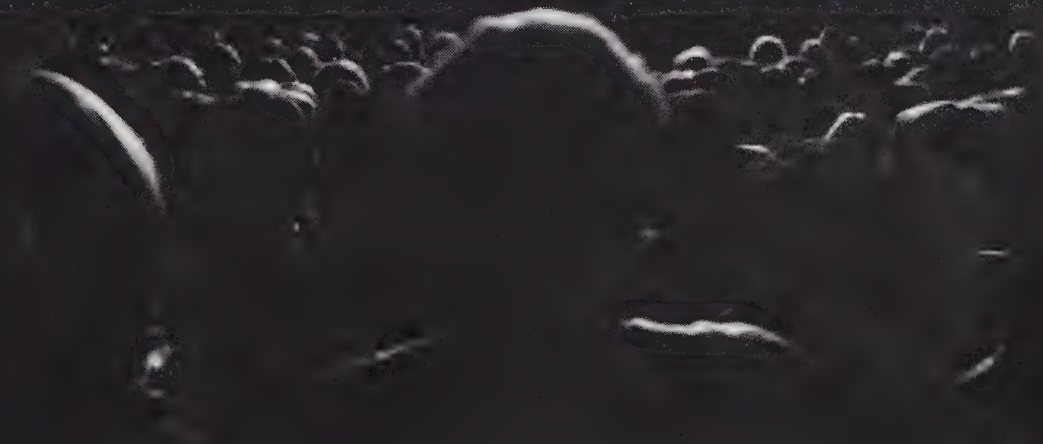
Kodak films for both extraoral and intraoral radiography give you high quality informative radiographs. And with proper processing, you'll need only a minimum of exposure.

For more information about our panoramic dental X-ray film, write:

Radiography Markets, Kodak Canada Ltd.,
3500 Eglinton Avenue West, Toronto, Ontario
M6M 1V3; or call a Kodak representative to
arrange an appointment.



a commitment
to quality



CARDIOPULMONARY RESUSCITATION: A TIMELY AND IMPORTANT TOPIC FOR ALL DENTISTS

Cardiopulmonary resuscitation, also known as CPR, is a combination of artificial respiration and artificial circulation which should be started immediately as an emergency procedure when cardiac arrest occurs, by those properly trained in the procedure.

It is now mandatory throughout the United States and Canada that all students of medicine, dentistry, nursing, and other health science disciplines be competent in CPR upon graduation. It is strongly recommended — and may soon become mandatory — that all dentists be capable of administering this basic life-saving first aid procedure.

Dr. A. G. Parnell of London, Ontario, will present a lecture entitled "Cardiopulmonary Resuscitation Saves Lives" on Monday afternoon, October 24. His presentation will provide a detailed study of the techniques of CPR which, when properly administered, allow cardiac arrest victims to obtain sufficient oxygen through the lungs and into the circulation, thus preventing irreversible brain damage.



Dr. A. G. Parnell

A Recording Resusci-Anne will be available during the lecture for demonstration purposes and for use by the audience.

Dr. Parnell is Professor and Chair-

man of the Department of Oral Surgery at the University of Western Ontario where he teaches oral surgery, local anaesthesia, intravenous sedation and resuscitation. He is a graduate of the School of Dental Surgery, Royal Dental Hospital of London, England, and a Fellow of the International Association of Oral Surgeons. He is a member of the British Association of Oral Surgeons and of the Canadian and American societies of oral surgeons. Dr. Parnell is also a member of the Ontario Heart Association as an official instructor-trainer in cardiopulmonary resuscitation.

An examiner in oral surgery for the National Dental Examining Board of Canada, he has served on a large number of committees for the Ontario Dental Association, the Royal College of Dental Surgeons, and for the University of Manitoba, where he was associate professor and head lecturer in oral surgery from 1965 to 1967.

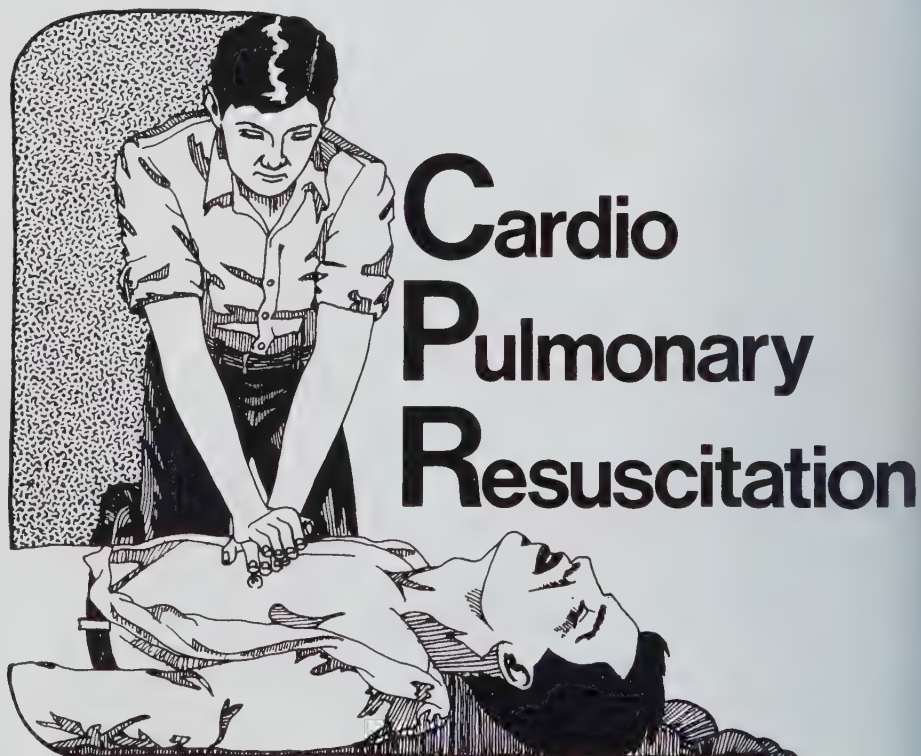
Dr. Parnell is the author of a number of scientific articles and is a well known lecturer in the field of dentistry.

Canadian Crafts Exhibit

An exhibit of Canadian Crafts will be featured on the mezzanine of the Automotive Building at the C.N.E. during the Congress. The craftsmen will be Canadian dentists and their wives.

REGISTER NOW

Don't wait. Since Congress attendance figures are expected to reach record levels, early pre-registration is strongly recommended. For your convenience a registration and hotel reservation form is included at the back of this issue. Fill it out and return it, with your cheque, today. This is one meeting you can't afford to miss.



The "gull wing" turbine



A breakthrough
in aerodynamic design.

Instead of
conventional *straight*
turbine blades...

blades with a
"gull wing" contour.

The performance is amazing!

No larger than a
miniature handpiece...
but more torque, more speed,
more controllable cutting
performance than standard
size handpieces.

This *and more* in the
new DENTSPLY AIROTOR "GW"
handpiece.

The
Dentsply
AIROTOR
"GW"
HANDPIECE

Ask your Dentsply dealer.

DENTSPLY
Equipment

D Dentsply International Inc., York, Pa.

© 1977 Dentsply International Inc.
All rights reserved.

DUPLICATION OF RADIOGRAPHS: SIMPLE METHODS TO BE USED IN THE DENTAL OFFICE

J. A. Reid, DDS, FAADR
London, Ont.

A. Ruprecht, DDS, FAADR
Saskatoon.

Duplicate x-ray films can be made by the dentist in his office with a minimum amount of equipment. This will enable him to retain his original films and to send suitable copies to other practitioners or to third-party insurance carriers. A camera can be used to make 35 mm slides of interesting radiographs for presentation at clinics on patient education. Magnified copies can also be made.

A simple quick method of duplicating radiographs is of great value to the dental practitioner. He can provide colleagues to whom the patient may have been referred or transferred with an adequate radiographic record without the necessity of parting with the original film and the possibility of loss.

Fortunately, radiographs can be duplicated easily through the use of special duplicating film and equipment. This equipment may be elaborate or quite simple. The basis for all duplicating units is the exposure of a special duplicating film by a light that has passed through the original film. Duplicating film differs from normal x-ray film in that it acts oppositely to light. Whereas light produces a "black" area on x-ray film (after processing), it produces a "white" area on duplicating film. If a normal x-ray film is exposed to light (or x-rays) it becomes "darker" and "darker" up to a point. Past this exposure level, it becomes "lighter". This phenomenon is referred to as solarization. (1). At this point, the film is no longer useful as x-ray film, but is extremely useful as duplicating film. The method of solarization is, of course, controlled by the manufacturer to ensure the same uniformity of action as for x-ray film. This duplicating film is sensitive to both white light and ultraviolet light (UV). Most automatic units use a UV source for the production of duplicates because of the film's greater sensitivity to that part of the electro-magnetic spectrum. However, as mentioned above, white light provides acceptable results.

Most radiologists have a duplicator (Fig. 1), since they have greater need to produce copies than do other practitioners. To produce only occasional duplicates, however, these units are relatively expensive to have in the general practitioner's office. For this reason, the dentist should con-

sider other duplicating methods. He can purchase a photographic contact printer (Fig. 2), which retails for about \$15 to \$20. Although not as sophisticated as the more expensive automatic devices, it produces a duplicate film of densities within the useful range for practitioners.

Method for production of duplicates

All procedures are performed under Kodak safe-light filters type Wratten 6B® or O.A.® If an ML-2® filter is used in the darkroom, time of exposure of the duplicating films to this light should not exceed three minutes (2). Care must be

Fig 1 Radiograph duplicator.





Fig 2 Contact printer.

taken in the handling of the duplicating film during aligning and timing to avoid fingerprints or creases.

The photographic contact printer has beneath its glass plate one small red bulb and two small white bulbs independently wired. When the unit is plugged into an electric outlet, the red bulb is on, giving a "safe-light" work surface. The film or films to be duplicated are laid on the glass sheet of the unit in the desired order of arrangement. The duplicating film is cut to fit over these films and laid on top of the original. Since the best results occur if the two films are in intimate contact, the originals should be unmounted if possible. If this is not possible, or if fine detail is not required, they may be left mounted, however, the resulting images will have blurred edges. The lid is then closed against a switch which will activate the white lights to effect the exposure.

Some experimentation with the time of exposure will be

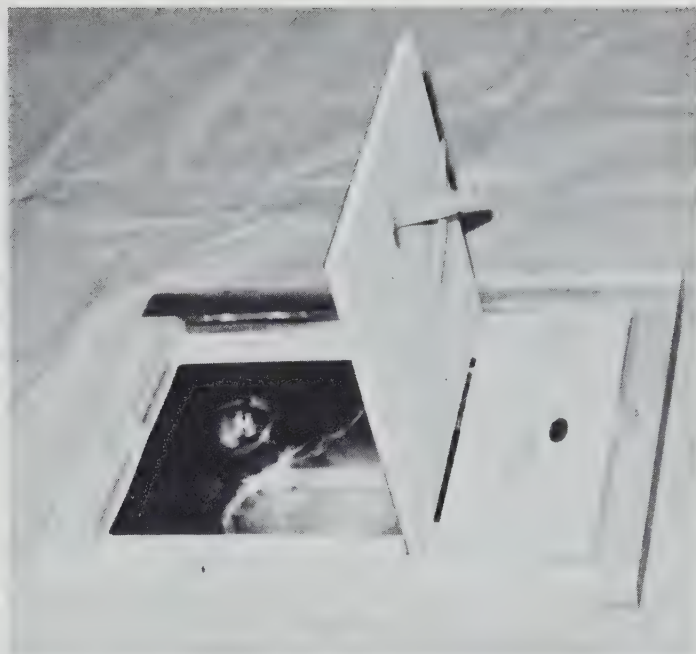


Fig 3 Photographic contact printing frame.

required to obtain duplicates of the proper densities. The time may vary from less than one second to seven or eight seconds. To increase the density (make the copy darker), the time is decreased, and vice versa. It is thus similar to a positive colour slide film — underexposure produces dark films, overexposure produces a light result.

To aid in proper orientation of x-ray films, there are raised dots indicating the buccal side of intraoral films. These are not present on the duplicates. The problem of orientation of the duplicate films can be overcome if all the originals are placed with the raised dot (buccal side) down, and if the duplicate film is laid on top with the emulsion side down, in contact with the originals. The emulsion of the duplicating film is of a purple hue prior to processing, and is found only on one side. The resulting finished film can now be oriented by checking for the emulsion side which is dull when viewed with reflected light. This corresponds to the buccal side of the original. The lingual side of the duplicate appears shiny in reflected light. The duplicating film can be cut slightly larger than the original radiograph, and the patient's name, date of the films, or side (left or right), can be written on the clear edge of the film. This method may be used for films up to four inches by five inches.

Large films

For larger films, such as a pantomographic film, the exposure can be made in a different manner. A photographic contact printing frame is then used (Fig 3). The original film is placed against the glass with the duplicating film behind it. The backing is closed, forcing the two into intimate contact. This "sandwich" of films can then be exposed to light. The ordinary illuminator view box can be used as a light source. However, if the printing frame is placed directly on the view box, the intensity of light is so great that an exposure time of a fraction of a second is difficult to control. This can be overcome by placing the printing frame



Fig 4 Equipment used to produce magnified copies of radiographs.

a greater distance — perhaps two feet — away from the illuminator when an exposure time of 10 seconds may be correct.* If films are to remain mounted, the blurriness can be overcome to some degree by backing the mounted film with duplicating film also in the contact printing frame, and placing it at one side of a darkened room with a slide projector directed at it from the other side of the room to give the effect of a point source of light and yet have an intensity sufficient for exposure at that distance. Glass mounted slides have been duplicated satisfactorily in this manner.

Both these methods provide duplicate films of the same dimensions as the originals. These methods may also be used to improve the diagnostic quality of poor films by varying the density of the duplicates. Thus, this method may be used to reduce radiation to the patient by eliminating the need for retake films. If duplicate films larger or smaller than the original are required, one must resort to other methods.

Slide production

If a 35 mm slide of a group of films or of a large film is desired, it can be produced with the use of a camera. Duplicating film is cut to size and placed in the camera behind the lens,⁽³⁾ or Kodak SO-185®, a 35 mm direct positive photographic duplicating film, may be used. Again, the same alignment of buccal side and emulsion side are maintained. The original films are arranged on an illuminator and

*A photographic enlarger can also be used as a light source.

all surrounding light is masked. The lens is focused at a distance that gives the size reduction of all or part of the original desired. Both exposures are performed on the B setting for shutter speed with the aperture on the smallest “f” number, that is, wide open. A cable shutter release will aid in ensuring the minimum amount of movement of the camera. Exposure times will vary, but for some films, such as a Panorex, about 15 seconds is indicated. Paradoxically, the smaller the original and the closer the camera to the films, the longer will be the exposure time.

Magnified copy

Although not as common, the need sometimes arises to produce a magnified copy for display purposes. If the film to be copied is a periapical, the dentist is still able to undertake this procedure in his office. The film to be magnified is held in a slide mount and placed in a slide projector (Fig 4). A photographic contact printing frame with white paper the size of the enlargement required is placed against a support such that it can be repositioned in the same location later when film is placed in it. The projected image is focused on the “screen” of paper at a distance that will produce an image of the desired size. The projector is then turned off and in the darkened room, the white paper is replaced by duplicating film and replaced in its correct position. The projector is turned on for the correct length of time to give the film the proper density. Experimentation is again required to achieve this density. Small strips of the duplicating film may be used to find the correct time before exposing a full sheet. The time, of course, will vary with the distance from the slide to the image and the intensity of the light from the projector (on the basis of the Inverse Square Law). When making an 8 × 10 enlargement of a periapical film with a Carousel® projector 30 inches from the screen, an exposure time of ½ second was achieved by using a photographic timing clock.

In all instances both the duplicating film and the Kodak SO-185® film may be processed in the same chemicals and under somewhat the same conditions used for proper processing of x-ray films by hand or in an automatic processor.

With proper care and attention to these films, the practitioner will find that duplicating films can aid greatly in establishing a proper referral system for his office that will greatly enhance his ability to both treat and educate his patients.

Dr. Reid is associate professor and chairman, Division of Oral Radiology, University of Western Ontario, London, Ont.

Dr. Ruprecht is associate professor and head, Department of Diagnosis and Radiology, University of Saskatchewan, Saskatoon.

- 1 Kodak Limited. Fundamentals of radiographic photography. No. 1. London, 1968, p. 15.
- 2 Richards, A. G. Duplication of radiographs. J Mich Dent Ass 57:337, 1975.
- 3 Pappas, G. C. Duplicating film in dentistry. Dent Clin N Amer 12:613, 1968.

A COMPARISON OF PANOREX AND INTRAORAL SURVEYS FOR ROUTINE DENTAL RADIOGRAPHY

R. G. Stephens, DDS, MSc

S. L. Kogon, DDS, MSc

J. A. Reid, DDS, FAADR

London, Ont.

A. Ruprecht, DDS, MScD, FRCD(C)

Saskatoon

The standard intraoral radiographic survey is compared with a Panorex plus bitewings for examination of common dental abnormalities such as caries, periodontal disease and periapical lesions. The lack of image sharpness in the Panorex reveals its unsuitability, especially in the anterior segments, unless supplemented by intraoral films. The pantomograph is a useful extraoral view where indicated but is not a substitute for the intraoral survey.

For many years, a complete mouth survey (CMS), consisting of from 12 to 20 intraoral films including bitewings (BW), has been the standard radiographic examination for the new dental patient. However, the development of the panoramic or pantomographic technique has raised the possibility of an alternative to the time-consuming and difficult intraoral technique. Many dental schools, hospitals and private offices have a pantomographic device in addition to the standard dental x-ray machine. In some institutions, routine examination now includes a pantomographic film in addition to the CMS plus BW. Conversely, the pantomograph in some instances, is replacing the CMS to be supplemented by intraoral films as the need is demonstrated. With the availability of the equipment and the simplicity of the technique, the role of this type of film is increasingly a matter of interest but its application raises a number of questions. Is the use of the pantomograph in addition to the CMS + BW justified for routine dental examination? Is the pantomograph plus BW a suitable substitute for the CMS? Is the pantomograph film simply a very useful extraoral view to be used selectively where an indication exists for a more extensive radiographic assessment of the jaws than can be obtained in the CMS? To answer these questions more information is needed on the comparative quality of each survey, because of the major differences between intraoral and extraoral films in terms of area covered and image sharpness (definition).

This study was designed to compare the CMS + BW with the Panorex® plus BW for routine dental examination,

Panorex® S. S. White, Dental Products Division, Philadelphia, Pa. 19102, U.S.A.

which includes the detection of caries, evaluation of periodontal bone support, determination of tooth numbers, position, development and identifying pathologic bone change.

Literature review

There have been conflicting reports in the literature on the role of pantomography for dental examination. Several studies (1-3) showed unsuspected abnormalities which the authors believed justified the use of the technique. Other authors (4-7) reported that the pantomograph was a very useful extraoral view that could supplement periapical films when necessary; however, they felt the pantomograph should not be substituted for intraoral radiography because of lack of detail and sharpness.

Conflict exists about the amount of radiation incurred from each method because of differences in methods of measurement (8-10). According to Kuba and Beck, (10) the claim of extremely low levels of radiation with the Panorex (equivalent to one periapical film) was unsubstantiated. Jerman (11) compared the pantomograph with the CMS using thermoluminescent dosimeters and reported a total of 82 per cent less radiation with the pantomograph at 23 different locations. Manson-Hing (12) also found that pantomographic exposures are one-third or less than the conventional extraoral radiographic survey. On the other hand, Bushong (13) concluded that the pantomograph was not suited for mass screening because of the amount of radiation. The importance of using techniques with the least amount of radiation is clear in view of the fact that some physicists question the value/risk ratio of any method of routine radiographic survey.

Materials and method

Radiographs used in this study were selected randomly by a radiographic technician from the files of the Faculty of Dentistry, University of Western Ontario. Each survey was complete and of good technical quality. Sixty-one surveys containing a pantomograph exposed on a S.S. White Panorex®, a CMS using bisecting angle techniques and duplicate BW were coded and separated into sets; each survey

Total number of anterior carious surfaces			Table 1
	CMS	Panorex	
Examiner 1	88	39	
Examiner 2	56	73	
Examiner 3	71	35	
Examiner 4	87	47	

Anterior caries identification by type of survey						Table 2
	More caries seen in CMS	More caries seen in Panorex	Caries numbers same (± 1) in each survey	Caries free	Total surveys	
Examiner 1	22(17)*	6	5	28	61	
Examiner 2	9(7)	10	14	28	61	
Examiner 3	19(15)	3	8	31	61	
Examiner 4	19(15)	3	9	30	61	

*Figure in brackets represents number of surveys where caries reported in CMS only and not seen in the Panorex.

Total number of posterior carious surfaces			Table 3
	CMS	Panorex	
Examiner 1	333	359	
Examiner 2	301	355	
Examiner 3	390	347	
Examiner 4	394	395	

Identification of apical lesions		Table 4
	No. of surveys	
Lesions seen on CMS only	7	
Lesions seen on both CMS and Panorex	6	
Lesions seen on Panorex only	1	

provided two sets of films, i.e., Panorex + 4BW and a CMS + 4BW. The identities of the film sets were not known to the examiners. Interpretations were done in a quiet darkened room using suitably masked view boxes and magnifying lenses. All the films in one set were completed before proceeding to the next.

Data were collected on specially designed forms for the following categories:

1. Teeth — the number of carious surfaces in the anterior and posterior segments were recorded. The anterior segment included the mesial surfaces of the cuspids. Anomalies of the teeth were also recorded.
2. Bone — the level of periodontal bone support was recorded using the cemento-enamel junction as the reference point. The bone was examined for periapical and general bone lesions.
3. Maxillary sinus abnormalities.

Results

Data are reported for caries, periodontal bone loss, bone lesions, developmental abnormalities, retained roots and sinus conditions.

Anterior Caries — The total number of carious surfaces by each type of survey is shown in Table 1. The interpretive value of the survey types is compared in Table 2.

Posterior Caries — Table 3 shows the total number of carious surfaces.

Periodontal Bone Levels — In 48 of the 61 surveys, all the examiners reported bone levels within normal limits in each survey type. One patient showed a severe reduction in bone level (5 mm from CEJ). This was identified as such by all examiners in both Panorex and CMS. For the remaining surveys (12), the examiners identified slight to moderate reductions in bone level, i.e., between 2 and 5 mm apical to the CEJ, in both surveys with a tendency to reporting slightly more bone loss in the Panorex.

Apical Lesions — In 14 of the surveys, the examiners identified bone changes consistent with rarefying osteitis (9 surveys), condensing osteitis (2 surveys), and hypercementosis (3 surveys) Table 4.

Developmental Abnormalities — The following tooth and jaw abnormalities were reported and are listed in descending order of frequency; external resorption, dilacerations, extra roots, supernumerary teeth, taurodontia, dens invaginatus, microdontia, torus, hypoplasia, Stafne-bone cavity.

These anomalies were identified with equal facility on either survey with the exception of two instances of dens invaginatus which were *not* seen on the Panorex while clearly observable on the periapical films.

Retained Roots — In four surveys retained roots were identified. These were reported by both survey methods but in three cases while the roots were seen as opacities on the Panorex, final identification of roots was dependent on the BW films. In the remaining instance where there were multiple large roots, the interpretation was clear with either survey method.

Sinus Conditions — Four instances of mucous retention cysts were reported by the examiners. Three of these were seen only on the Panorex-BW survey; the remaining one was seen on the CMS only. Two instances of sinusitis were reported and were seen on the Panorex only.

Caulk[®]
Jeltrate[®]
- get it right
the first time.

For more
information
check number 101

No wasted chair time. No costly makeovers. Caulk Jeltrate Alginate Impression Material gives you an accurate impression the *first* time.

Jeltrate has the proper flow to register every oral detail. So appliances fit into place with unerring accuracy, even in the most complicated cases.

Available in three consistencies—Regular, Fast Set, Heavy Body. But the mix *always* works up the same. Smooth. Creamy. Never runny. Never stiff. Batch after batch after batch.

Caulk Jeltrate . . . nice material to work with . . . dependable.

Caulk® making life
a little easier
for dentists

Division of Dentsply International Inc.



Discussion

Pantomography is a form of tomography where the film and the x-ray source are rotated about the patient with the intent of blurring all the anatomical structures of the skull except for a small plane or focal trough wherein the structures are to be recorded. Factors such as motion of the film and patient, the use of fluorescent screens and longer object to film distances contribute to degradation of the image. Other factors such as the tube shift at the midline, the inability to penetrate the interproximal areas at a right angle to the film contribute to superimposition, and overlapping in the centre of the film. In addition, the manufacturer's suggested kilovoltage may be lower than required to produce a film of sufficient contrast for optimal interpretation. However, the pantomographic method does have the important advantages of technical simplicity, patient comfort and reduced radiation.

All extraoral films in comparison with intraoral films lack the image sharpness needed for examination of small lesions such as dental caries. Therefore, the results with anterior caries (Table 1) were expected (14-16), although the inability to see any radiographic sign of caries, however unsharp, in over half the cases (Table 2) was unexpected. Dentists have used BW films for years to supplement the periapical film in the examination of posterior interproximal surfaces for caries. A Panorex + BW or the CMS + BW as seen in Table 3 produce total posterior caries figures which are comparable. The parallel film position, projection of x-rays at a right angle to the film and a short object to film distance combine to give the BW radiograph unequalled image sharpness and anatomic accuracy for interpretation of caries. The figures in Table 3 support the view that, provided BW films are employed, the type of survey taken for other purposes does not affect the interpretation of posterior caries. For anterior caries where a BW film is impractical because of the anatomy, it is necessary to supplement a Panorex with periapical films and to rely on a careful clinical examination.

Where examination of the periodontal bone support was limited to a gross measure, such as the bone level, either of the surveys supplemented by BW films were satisfactory. As with caries interpretation, evaluation of all posterior areas was done mainly with the BW films. A periapical survey without BW films, especially if taken with a bisecting angle technique, will give a false impression of bone levels higher than actually present. A Panorex alone is adequate for a general survey of bone levels, but the lack of image sharpness makes it difficult to precisely locate the CEJ. The tendency will be to over-estimate somewhat the amount of bone loss, as was the case in this study.

The weakness of the Panorex alone is clearly evident in identification of periapical lesions of the anterior teeth (Table 4). The lesions seen on both surveys were large radiolucent changes, while those missed (50 per cent) were smaller and were overlooked because of the lack of image sharpness and superimposition of structures in the midline.

For examination of the maxillary sinus, the Panorex is more suitable than the intraoral film because of the wide area covered. However, it has been our experience that the Panorex is not a substitute for standard extraoral sinus projections for patients with clinical symptoms of sinusitis. The Panorex film does not show the expected radiographic change which is clearly shown in the Waters' view.

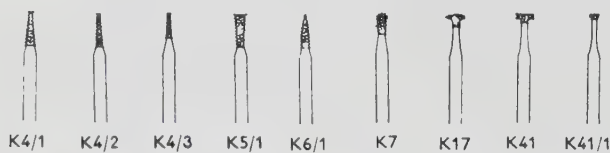
Most dental abnormalities can be identified by either survey method except where fine detail is required, e.g. dens invaginatus. Small root tips can be seen in the Panorex as opacities, but final identification based on the presence of root canals and periodontal ligament spaces usually requires the addition of a periapical film.

This study was not designed to compare the Panorex with the CMS as the sole radiographic examination of the dental tissues. The Panorex, like all extraoral films, is not comparable to the intraoral film with respect to image sharpness, and therefore is not suited for examination of fine detail. The type of film emulsion, use of screens, longer object to film distance, and motion are inescapable technical factors which result in film definition unsuited for examination of fine structures and lesions of primary concern to the general practitioner in dentistry. It is also true that the CMS alone, i.e., without BW, has limitations, especially if taken with a bisecting angle technique. Very early in the practice of intraoral radiography the need for a parallel film view, which alone can give accurate orientation of normal and pathologic changes in the teeth and supporting periodontal bone, was recognized. As a result the BW film became an important supplement to the periapical film. The "long cone technique" (parallel film technique) could, in theory, eliminate the need for BW films, but in practice the anatomy of many mouths precludes the universal application of the technique.

Conclusion

The shortcomings of the Panorex even when supplemented by BW films becomes most obvious in the anterior segments of the mouth. In any part of the mouth, examination for caries, periodontal and small periapical changes cannot be reliably performed by the extraoral film. The pantomograph has served a useful purpose for screening large numbers of patients, for example, in the armed forces. In some dental specialties such as oral surgery and orthodontics, the wide area covered by the extraoral film is important. However, for the small lesion of concern in endodontics, restorative and periodontics, the intraoral film is indispensable; it is difficult to justify the pantomograph in addition to the traditional CMS for these purposes.

In the young patient and in the older partially or totally edentulous patient, a pantomograph has a role if supplemented by intraoral films where indicated by the judgment of the dentist. In these patients and in instances of infection or trauma, the extraoral films have been used to by-pass the difficulty and even the impossibility of obtaining intraoral views. There is also the additional factor of reduced radiation which should be considered.

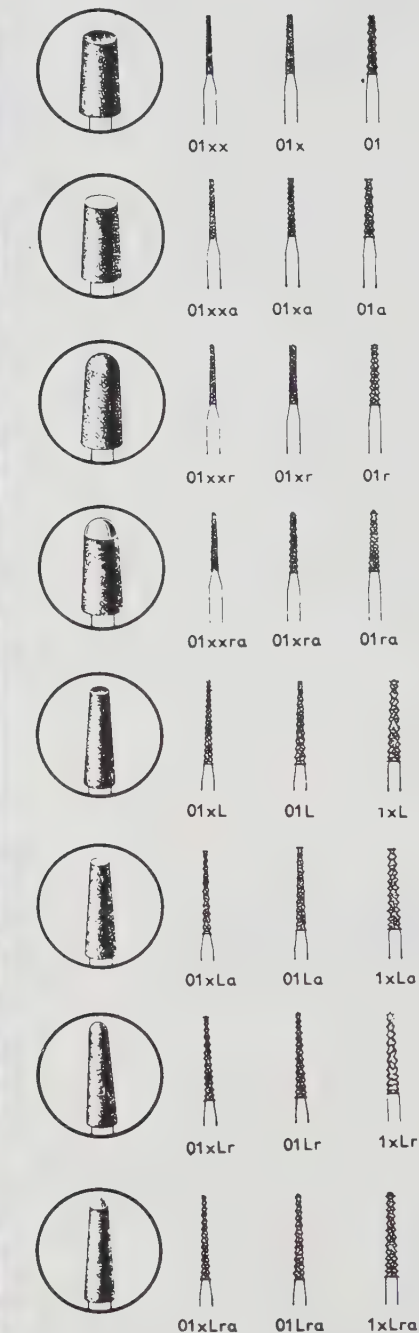


FOR

CO

HORICO

**DIAMOND
INSTRUMENTS**



THESE, AND MANY MORE

Write for Catalog No. 143

PFINGST & COMPANY, INC.
62 COOPER SQ. NEW YORK, N.Y. 10003

The pantomograph is an extraoral view of value, but like all extraoral films the technical factors involved produce an image which cannot compare with the intraoral film in image sharpness. In addition, spurious anatomic and artefactual shadows may confuse interpretation when the examiner is inexperienced. As long as these facts are recognized, the pantomograph will not be used for examination of common dental conditions where the size of the lesion require the image sharpness inherent in the intraoral film.

This study was supported by a grant from the Richard Ivey Foundation. The authors wish to acknowledge the support and assistance of R.I. Brooke, Chairman, Department of Oral Medicine, London, Ont., and Mr. T.L. Batten, Chief Technical Officer for his help in selecting the representative films.

Dr. Stephens is Professor, Department of Oral Medicine, University of Western Ontario, London, Ontario.

Dr. Kogon is associate professor and chairman, Division of Oral Medicine, University of Western Ontario.

Dr. Reid is associate professor and chairman, Division of Oral Radiology, University of Western Ontario.

Dr. Ruprecht is associate professor and head, Department of Diagnosis and Radiology, University of Saskatchewan, Saskatoon, Sask.

- 1 Keith, D. A. Radiographic detection of unsuspected pathologic conditions: a survey of 1,000 orthopantomogram radiographs. *J Dent Res* 51:1250, 1972.
- 2 Lilly, G. E. Oral Health of dentists: analysis of panoramic radiographs. *J Oral Med* 22:23, 1967.
- 3 Morris, C. R. and Jerman, A. C. Panoramic radiographic survey: a study of embedded third molars. *J Oral Surg* 29:122, 1971.
- 4 Langland, O. E. The use of the orthopantomograph in a dental school. *Oral Surg* 24:480, 1967.
- 5 Scandrett, F. R., Tebo, H. G., Quigley, M. B. et al. Radiographic examination of the edentulous patient. Part I. Review of the literature and preliminary report comparing three methods. *Oral Surg* 35:266, 1973.
- 6 Laney, W. R. and Tolman, D. E. The use of panoramic radiography in the medical center. *Oral Surg* 26:465, 1968.
- 7 Turner, K. O. Limitations of panoramic radiography. *Oral Surg* 26:312, 1968.
- 8 Richards, A. G. and Webber, R. S. Dental x-ray exposures of sites within the head and neck. *Oral Surg* 18:752, 1964.
- 9 Weissman, D. D. and Longhurst, G. E. Comparative absorbed doses in periapical radiography. II. Panorex. *Oral Surg* 33:661, 1972.
- 10 Kuba, R. K. and Beck, J. O. Radiation dosimetry in panorex roentgenography. Part III. Radiation dose measurements. *Oral Surg* 25:393, 1968.
- 11 Jerman, A. C., Kinsley, E. L. and Morris, C. R. Absorbed radiation from panoramic plus bitewing exposures vs full-mouth periapical plus bitewing exposures. *J Amer Dent Ass* 86:420, 1973.
- 12 Manson-Hing, L. R. Panoramic dental radiography. Springfield, Ill. CC Thomas, 1976.
- 13 Bushong, S. C., Glaze, S. A., Foster, J. K. et al. Panoramic dental radiography for mass screening? *Health Phys* 25:489, 1973.
- 14 Stewart, J. L. and Bieser, L. F. Panoramic roentgenograms compared with conventional intraoral roentgenograms. *Oral Surg* 26:39, 1968.
- 15 Ohba, T. and Katayama, H. Comparison of orthopantomography with conventional periapical dental radiography. *Oral Surg* 34:524, 1972.

Expand your diagnostic skills and update your clinical techniques with the help of these new Mosby books.

A New Book!

DISEASES OF THE TEMPOROMANDIBULAR APPARATUS: A Multidisciplinary Approach

For the first time, a single reference examines all facets of this perplexing problem — providing you with a comprehensive, multidisciplinary discussion based on 15 years of research and the experience of many distinguished contributors. After reviewing basic science aspects of TMJ disease, the book focuses on diagnosis and treatment. You'll find detailed information on: gnathological methods of therapy; splints and bite plates; biofeedback; surgery; physiotherapy; pharmacology; and more.

Edited by Douglas H. Morgan, D.D.S.; William P. Hall, M.D.; and S. James Vamvas, D.D.S., F.A.C.D.; with 39 contributors. September, 1977. Approx. 448 pages, 8" x 10", 491 illustrations. About \$41.50.

A New Book!

ORAL FACIAL GENETICS

Here's a valuable new book that offers you a comprehensive overview of oral facial diseases directly or indirectly affected by genetic influences. Sharing the insights of some of the foremost authorities in the field, it carefully catalogues and classifies genetic disorders of the face and intraoral structures. Each disorder is individually characterized by clinical manifestations, pathology, basic defect, and prevalence and inheritance pattern.

Edited by Ray E. Stewart, D.M.D., M.S. and Gerald H. Prescott, D.M.D., M.S.; with 15 contributors. January, 1977. 680 pages plus FM I-XIV, 7" x 10", 660 illustrations. Price, \$49.90.

New 3rd Edition!

ORAL MICROBIOLOGY

This well illustrated new edition can provide you with an understanding of the basic science aspects of microbiology, as well as those factors particularly relevant to dentistry. This revision features additional material on cytology, physiology, the growth of microorganisms, microbial genetics, normal microflora of the body, host-parasite relationships, and immune mechanisms — to offer you a complete review of oral microbiology.

Edited by William A. Nolte, B.S., M.S., Ph.D.; with 7 contributors. June, 1977. 3rd edition, approx. 704 pages, 7" x 10", 392 illustrations. About \$22.60.

for your staff...

A New Book!

CURRENT CONCEPTS IN DENTAL HYGIENE

This book is the first in a new biennial series on current trends and concepts in dental hygiene. Original, informative discussions examine the changing role of the dental hygienist; and the philosophy, history, and most current techniques in the field. Four-handed dental hygiene, myofunctional therapy, practice management, dietary counseling, problems of occlusion, and behavior modification are all examined in detail.

Edited by Suzanne Styers Boundy, R.D.H., M.S. and Nancy J. Reynolds, D.D.S.; with 15 contributors. January, 1977. 244 pages plus FM I-XII, 6½" x 9½", 98 illustrations. Price, \$13.40.

MOSBY
TIMES MIRROR

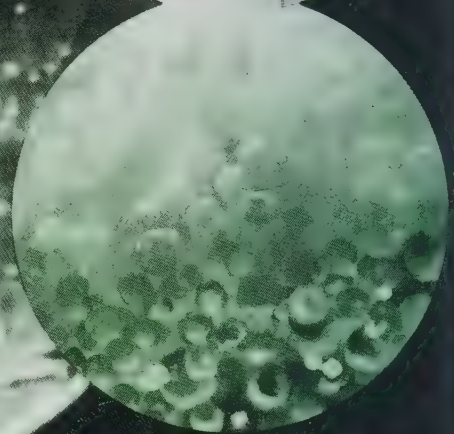
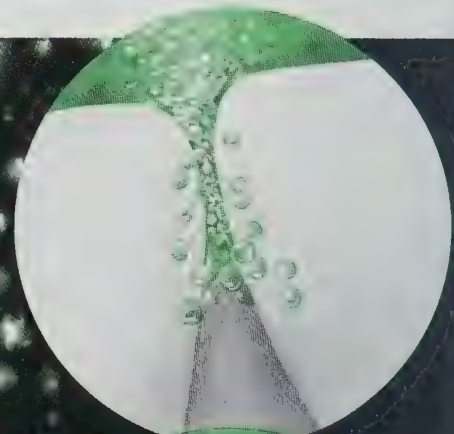
THE C. V. MOSBY COMPANY, LTD.
86 NORTHLINE ROAD
TORONTO, ONTARIO
M4B 3E5

Reformulated Polident® Tablets help clean tough denture stains as easy as..

1. Anionic detergency
active ingredients penetrate
stains and plaque that adhere
to the denture

2. Powerful chemical action
changes calculus binders to
more soluble material; deposits
disintegrate

**3. 50% more effervescent
cleaning action**
to better help clean away stains
and odor-causing debris



Reformulated POLIDENT in conjunction with regular brushing will help keep dentures clean and odor-free.

**Recommended by
more dentists
than any other
soaking cleanser.**



PARALLELING RADIOGRAPHIC TECHNIQUE WITHOUT THE LONG CONE

J. A. Reid, DDS, FAADR
R. G. Stephens, DDS, MSc
London, Ontario

The paralleling film technique is acknowledged to be the most accurate method of recording the radiographic image of dental structures. Unfortunately, it is not the technique most commonly used. This article explores the reasons for this and recommends that the paralleling film technique can be used with a conventional x-ray tube head by substituting an extension tube about 2 inches longer than the conventional short cone or tube. Although the magnification is 1.48 per cent more than occurs with the 16 inch extension tube, this is not detectable visually. The modest tube length eliminates the awkwardness of the "long cone" in the small dental office.

The traditional technique for intra-oral radiography is the bisecting angle method first described in the early 1900's. The technique is a compromise which contravenes several of the basic rules of image formation; specifically the film is not parallel to the object nor is it at a right angle to the central ray of the x-ray beam. The resultant anatomic distortion and incorrect orientation of normal and pathologic structures were soon recognized and led to the proposal by McCormack (1) of a paralleling film technique which later became known as the "long cone". The research and publications of Fitzgerald (2-4) and Updegrave (5) largely established the technique in its present form, especially the use of a 16 inch source-film distance as the minimum distance at which acceptable films could be produced. In spite of the demonstrated advantages for the paralleling technique, use of the bisecting method is more common and it is more frequently taught to dental students and auxiliaries.

The historical reasons for lack of acceptance of the paralleling technique were the longer exposure time, the complex holding devices for paralleling the film, and the length of the extension tube. The development of fast film and a simple disposable film holder have removed two of the problems. It would seem that the only remaining shortcoming may be the need to use a long extension tube which is awkward to manipulate in the confined space of the average dental office. The switch to long extension tubes also may give rise to difficulties in the judgement of angles and in the centering of an x-ray beam collimated to give a circle of radiation at the film of approximately 2¾ inches. The term

"long cone technique" was originally applied because a long extension tube with a cone at the end was used instead of the short cone of the bisecting angle technique. In time, the pointed end of the extension tube was removed and the terms extension tube and PID (position indicating device) were introduced. Unfortunately, the obvious differences in length between the tube and the short cone led many to ascribe the advantages of the technique to the "long cone" alone. An analysis of the principal factors in image formation will help to describe the role of the extension tube in the paralleling film technique.

Four factors are important in image formation: object to film distance, angle of the film relative to the object, angle of the central ray relative to the object and source (focal spot) to object distance. These factors give rise to the following rules, the application of which have produced our current techniques.

1. The object-film distance should be as small as possible so that the natural divergence of x-rays produce as little magnification and thus unsharpness as possible.
2. The source-film distance should be as long as is needed to employ the less diverging rays in the central core of the beam of radiation, again to reduce magnification.
3. The film should be parallel to the object so that the image will be anatomically correct in the orientation of component parts, e.g. crest of the interdental septa relative to cemento-enamel junction.
4. The central ray should be at a right angle to the object and the film to prevent distortion, i.e., elongation or foreshortening.

The anatomy of the tooth-bearing area of the jaws (except in the lower molar-bicuspid region) is such that if the film is closely adapted (rule 1), it assumes a position at a diverging angle from the root end and the periapical tissues. With the film at an angle to the tooth, the central ray cannot be directed perpendicular (rule 4) to the object without elongation nor can it be perpendicular to the film without foreshortening. The essential compromise of the bisecting angle resulted.

To obtain a parallel film position and thus permit direction of the central rays perpendicular to the object and the film, the only recourse is an increase in the object-film distance. The film is moved away from the teeth where the

sloping alveolar bone does not interfere with a parallel film position. In the upper arch, the film, while parallel, will be approximately 20-25 mm ($\frac{3}{4}$ to 1 inch) from the teeth (6). With the relatively short source-film distance (short cone) used in the bisecting angle technique, the divergence of the rays would at the increased film distance, result in an unacceptable degree of magnification and unsharpness. The use of a greater source to film distance, i.e. the long cone, was required to take advantage of the less diverging rays and thus restore image sharpness.

As the source to film distance was doubled from 8 to 16 inches, a fourfold increase in exposure time resulted (inverse square law). In the 1940's when the usual exposure time was 6 seconds, then a 24 second exposure would be needed for the 16 inch distance. The introduction by Kodak of ultraspeed films in 1941 (7) and a further increase in film speed in 1955 (7), permitted an acceptable exposure time of 1.5 seconds for the 16 inch distance. To position the film parallel to the teeth and, therefore, at a distance of between $\frac{3}{4}$ and 1 inch from the teeth created the problem to be solved by film holders. Unfortunately, some of these devices were complex, difficult to use and required sterilization. Simple, disposable styrofoam holders are now available, eliminating this problem.* In the years since the original techniques were developed, the size of the source of the x-ray machine has become smaller from the 1.5 mm size that Fitzgerald (2) used, to the reported size of most modern machines of 0.8 mm.

However, even with the short exposure time, smaller source, simple holders and clear diagnostic superiority, the paralleling film technique remains only an alternative to the bisecting angle method with all its shortcomings. The extension tube or long cone may be the remaining deterrent to wider acceptance of the technique.

The Richards (8) x-ray tube head with the "built-in" long cone was an attempt to alleviate this problem. The x-ray tube was placed at the back of the tube housing to give a source-film distance of 16 inches so that the position-indicating tube providing the beam direction was about the same length as the conventional cone or tube used with the bisecting-angle technique. However, this tube-head is marketed only by S.S. White and Morita. Thus, all who have the conventional tube head must still use the long and awkward extension tube.

There is confusion as well, because some manufacturers provide extension tubes of such length that when allowance is made for the two inches from face to film an actual source to film distance of 18 inches is being used. This makes the extension tube even longer and more unwieldy than necessary.

The object of this study was to determine if a more manageable source-film distance would still result in acceptable diagnostic films without the use of the full 16 inch extension tube. It has been shown that the greatest decrease in magnification occurs between 8 and 16 inches

Image length* in millimeters (mm) at three object-film distances with source-film distances from 8 to 16 inches

Table 1

Object-film distance	Image length		
	.75 inch	1.0 inch	1.25 inch
Source-film distance			
8"	22.3 mm	22.8 mm	23.6 mm
9"	22.0	22.4	23.3
10"	21.9	22.2	22.9
11"	21.6	21.9	22.5
12"	21.3	21.7	22.3
13"	21.2	21.7	22.1
14"	21.2	21.5	21.9
15"	21.2	21.5	21.7
16"	21.1	21.4	21.6

*Actual object length was 20.25 mm.

with very little further advantage gained by any greater distance. As a result the standard source to film distance for the parallel film technique has been 16 inches (5). However, since the graph of decreasing magnification follows a curve, it was proposed to measure the magnification at one-inch intervals between 8 and 16 inches, i.e., at source to film distances of 8, 9, 10, 11, 12, 13, 14, 15 and 16 inches. If, in fact, the greatest decrease in magnification occurs early in the range, it might then be possible to use source to film distances of less than 16 inches and still obtain diagnostic films, thus avoiding the use of long extension tubes.

Materials and method

The location of the source or focal spot of the x-ray tube within the housing of the x-ray head was determined experimentally to verify the manufacturers description.

A stainless steel wire object (Fig 1) was devised with a length of 20.25 mm (equivalent to the length of an average molar). This was fixed to a plastic block which had three grooves milled in it; the block would be used as the film holder. Since the object film distance (tooth-film) is usually about 1 inch, but can vary from $\frac{3}{4}$ to an actual limit of $1\frac{1}{2}$ inches, exposures were made with the film in each of these three locations for each source — film distance of 8, 9, 10, 11, 12, 13, 14, 15 and 16 inches. (An exact meter/inch rule was used for positioning the object in relation to the source.) All recordings were in both millimetres and inches.

The films (Kodak ultraspeed) were processed using an automatic processor to ensure uniform development. The radiographs were attached to glass slides so that the image length could then be measured on a microscope with a travelling stage at $10\times$ magnification. A hair in the eyepiece was used to locate the ends of the image and the length was read from the Vernier scale on the stage of the

*Stabe® Film Holder — marketed by Green Dental Products Inc.

Fig 1 Film in middle groove of plastic block giving a one inch object to film distance.

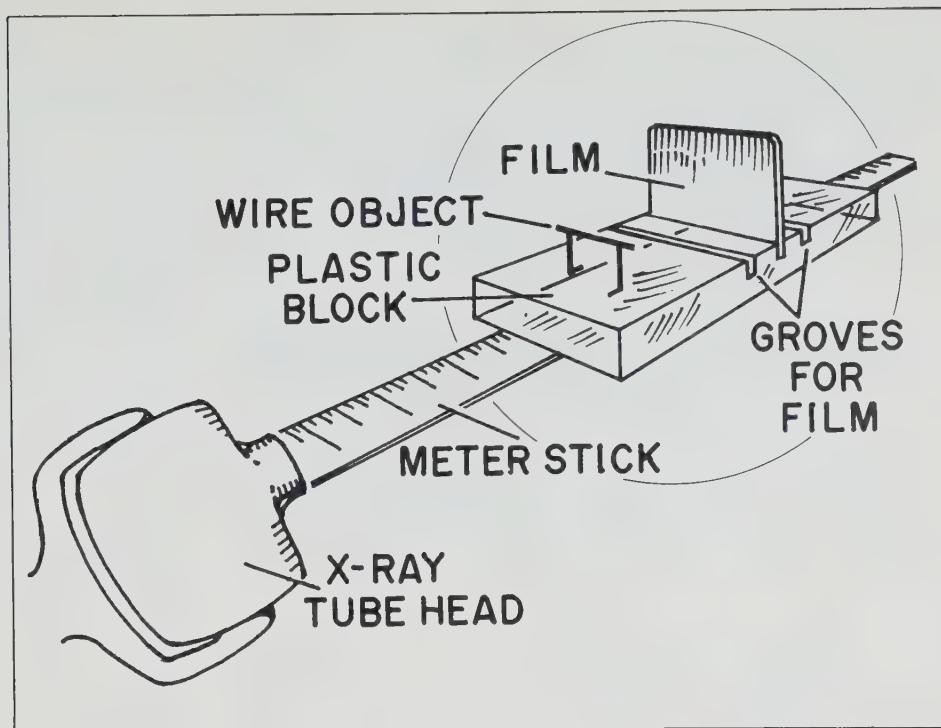
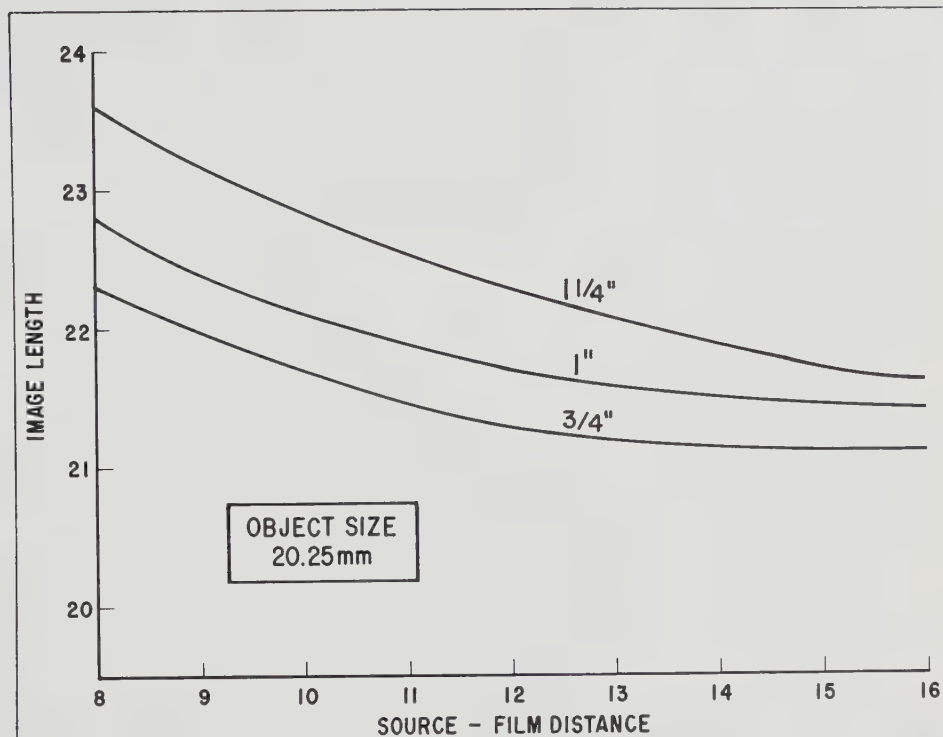


Fig 2 Graph showing increase in magnification as source to film distance is reduced from 16 to 8 inches at three different object to film distances. Little change in magnification shows between 16 and 12 inches.



microscope. The length was recorded in millimeters to the first decimal and the results analyzed.

Results

Image length in millimeters for source-film distances at 1 inch intervals between 8 and 16 inches inclusive are shown in Table 1. Results are shown for object-film distances of .75, 1.0 and 1.25 inches which represent the range likely to be used in the paralleling film technique. An object-film distance of 1.25 inches is not common but may be encountered in positioning films in the upper and lower anterior; for upper molar regions, a distance of .75 - 1 inch is the most common (6). Image length at a 1 inch object-film distance and 16 inch source-film distance is 21.4 mm for an

object which was 20.25 mm by measurement, an enlargement of 1.15 mm. As the source to film distance is reduced, the enlargement of the image increases slightly. At a 12 inch source-film distance, the enlargement is .3 mm greater than at 16 inches. At less than a 12 inch source to film distance, the enlargement range is .5 - 1.4 mm. The degree of magnification at less than 12 inches is significant, whereas an enlargement of .3 mm between 16 and 12 inches represents a magnification increase of 1.48 per cent (Fig 2). The results seemed to suggest that if a 16 inch source to film distance will deter dentists from using the parallel film technique, then a reduction to a 12 inch distance might be preferable to abandoning the paralleling film technique.

To test whether this slight magnification would affect the

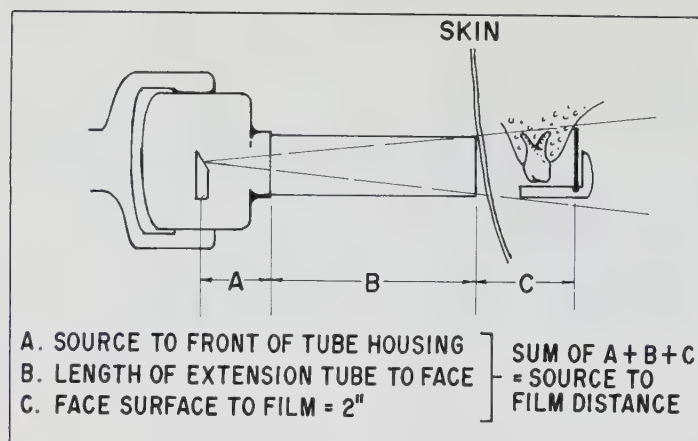


Fig 3 Illustrating the three components in source to film distances. Distances A and B vary with x-ray equipment as shown in Table 2.

Data showing location of focal spot (source); length of existing short cone; tube (cone) length required to give 12 inch S.FD.

Table 2

Make of x-ray unit	S.S. White	General Electric	Ritter
Distance from focal spot to front of tube housing	2.48"	2.4"	3.26"
Length of existing short cone	4.38"	5.5"	4"
Tube length required to give S.FD 12"	7.5"	7.6"	6.74"

diagnostic quality of dental radiographs, several complete mouth surveys were taken. For one side of the mouth a source to film distance of 16 inches was used; a 12 inch source to film distance was used on the opposite side. In the emergency clinic two periapical films were taken, one film at each of the source to film distances. Examination of the resulting films indicated that the interpreters were unable to determine whether the 12 or 16 inch source to film distance was used. The slight degree of magnification as shown in Table 1 did not translate into visually detectable image unsharpness.

The use of a 12 inch source to film distance actually involves an extension tube of only 6.5 - 7.5 inches when allowance is made for a 2 inch face to film distance and a source or focal spot location 2.5 - 3.5 inches behind the front of the tube housing (Fig 3). Table 2 shows the distance from the focal spot to the front of the tube housing in the x-ray head for three makes of x-ray machines used in our clinics. When allowance is made for a 2 inch face to film distance the actual tube length required to give a 12 inch source to film distance has been listed. This can best be achieved by cutting a long extension tube to the appropriate distance and modifying the aperture of the collimating de-

vice to produce a beam size of 2¾ inches at the end of the tube.

Perhaps the manufacturers of the equipment can be persuaded to market an extension tube to give the 10 inch source to face (12 inch source to film) distance with the appropriate beam collimation that will permit the use of the superior paralleling film technique if its non-use results from space limitations in the dental office.

It may be suggested that this benefit can be achieved by using a standard short "cone" and withdrawing 2.5 to 3 inches from the face. Unfortunately, this would cause the beam of radiation at the face to be larger by ¾ to 1½ inches than the recommended 2¾ inches, an increase of 28 and 42 per cent respectively in the area of radiation received.

Conclusion

An experimental model for use with the paralleling film technique was devised from which the enlargement or magnification at various source-film distances was determined. The findings suggest that a 12 inch source-film distance (actual extension tube length of 6.5 - 7.5 inches depending on the x-ray machine used) while causing slightly (0.3 mm) greater image magnification than the ideal 16 inch source-film distance, does not result in image unsharpness which is visually detectable. Complete mouth series and emergency films, half of which were taken at the 12 inch distance, showed no loss of image sharpness or definition that was discernible to the interpreters. If the standard extension tube, which gives a 16 inch source-film distance, is unmanageable in the small dental office, then it is practicable to use the diagnostically superior paralleling film technique with a modest tube length of 6.5 - 7.5 inches, which will give a 12 inch source to film distance.

The authors acknowledge with thanks the work of Mr. John R. Paterson, a third-year dental student, in making the exposures and measurements.

Dr. Reid is associate professor and chairman, Division of Oral Radiology, University of Western Ontario, London.

Dr. Stephens is professor, Department of Oral Medicine, University of Western Ontario.

- 1 McCormack, F. W. A plea for a standardized technique for oral radiography. *J Dent Res* 2:467, 1920.
- 2 Fitzgerald, G. M. Dental Roentgenography. I: An investigation in adumbration or the factors that control geometric unsharpness. *J Amer Dent Ass* 34:1, 1947.
- 3 Idem. Dental Roentgenography. II: Vertical film placement and increased object — film distance. *J Amer Dent Ass* 34:160, 1947.
- 4 Idem. Dental Roentgenography. III: The roentgenographic periapical survey of the upper molar region. *J Amer Dent Ass* 38:293, 1949.
- 5 Updegrave, W. J. Simplifying and improving intraoral dental roentgenography. *Oral Surg* 12:704, 1959.
- 6 Barr, J. H. and Gron, P. Palate contour as a limiting factor in intraoral x-ray technique. *Oral Surg* 12:459, 1959.
- 7 Richards, A. G. Trends in radiation protection. *J Mich Dent Ass* 51:18, 1969.
- 8 Idem. New concepts in dental x-ray machines. *J Amer Dent Ass* 73:69, 1966.

CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE.

Direct advertising copy to:
Marie Cosgrave, Classified Advertising Manager,
Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6.
Telephone: (613) 523-1770.

CLASSIFIED ADVERTISING RATES

(Per Insertion Per Issue):

Minimum (50 words or less)	\$15.00
Each additional word	.30
Service charge for C.D.A. Box No.	2.00

DISPLAY CLASSIFIED ADVERTISING RATES:

Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box,
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

BRITISH COLUMBIA: Practice — one hour Vancouver in seaside resort. Purpose built office, 18 months old. Two operatories, hygienist room, Panorex and new equipment. Last year's gross \$187,000. Suit one or two dentists depending on energy. Reply to CDA Box Number 1702.

BRITISH COLUMBIA — Williams Lake. Well established practice with three operatories, private office, laboratory, reception room, bathroom, and pass through sterilizing room. Dentist retiring in June. Contact: Dr. Alec Clark, 350 Borland Street, Williams Lake, B.C. V2G 1R6.

ALBERTA — Elk Point. Twenty-year-old "rural" practice for sale in small north-eastern Alberta town, 700 sq. ft. office with 3 operatories. Hospital privileges, high gross, low overhead. Excellent opportunity for immediate take over. Ideal outdoor recreation area with lakes and hunting. No cash outlay required. Reply to CDA Box Number 1692.

ALBERTA — Grand Centre. Dentist urgently required for a high gross, heavily booked practice in a town of approximately 3,000 population and a drawing area of an additional 15,000. Would like to sell spacious ultra-modern dental building the practice is housed in, or can be leased if desired. No other dentist presently available to serve this area. High immediate income assured in a "ready-to-move-in" practice. Call or write: Dr. J. F. Stengl, Box 809, Grand Centre, Alta., phone: (403) 594-5274.

ALBERTA — Red Deer. An opportunity exists in this Central Alberta city for a certified oral surgeon. Approximately 30 general practitioners service the Red Deer drawing area of 100,000. A new hospital is expected to open by 1980. Patients are presently travelling 90 miles to Edmonton or Calgary. Contact Dr. R. Y. Gish, Box 1780, Lacombe, Alberta, T0C 1S0.

ALBERTA — Southern. For rent, sale, or associateship. Only dentist serving a large area. New building, equipment, and high gross income. Reply to CDA Box Number 1679.

District Health Centre

MANITOBA — Lac Du Bonnet. Practice opportunity available for full time dentist in resort area of Manitoba, 70 miles from Winnipeg. Facility opened March 1977. Dental suite furnished with new, modern equipment. Please contact: Mrs. Beth Dyck, Executive Director, Lac Du Bonnet District Health Centre, Box 1030, Lac Du Bonnet, Manitoba, R0E 1A0, Phone (204) 345-8647.

ONTARIO — Caledon Hills Area. Busy, well established, modern general practice for sale. Two operatories. Hygienist. Located in a cosmopolitan, developing country area within easy reach of Toronto night-life. Returning for post-graduate studies. Available immediately. Very reasonable terms. Low cash outlay. Phone: Dr. C. P. Minett (519) 856-4903 (home), or write: RR#2, Guelph, Ont. N1H 6H8.

ONTARIO — Cannington. Golden opportunity awaits any dentist setting up practice in Cannington, 70 miles north east of Toronto. Rapidly developing small town of 1,500. Local hospital privileges. New medical center with spacious fully serviced dental suite. Present part-time dentist leaving to concentrate on his city practice but might sell some equipment. Reply to Box 370, Cannington, Ontario L0E 1E0. Phone: (705) 432-2569.

ONTARIO — Collingwood. Modern dental office in professional building, includes two operatories, laboratory, dark room, reception area, waiting room, private office. Thriving industrial town, hub of Georgian Bay — 10 minutes to Blue Mountain ski hills, 7 miles to Wasaga Beaches — 85 miles northwest of Toronto. Lifetime opportunity — reasonable rent. Contact: TOPPS — 95 Ava Road, Toronto, Ontario, M6C 1V9. Phone: (416) 783-0601 or 782-0511.

ONTARIO — Ottawa. For sale or lease, Ottawa Center. Established busy adult general practice in large modern professional building. Two operatories, one with modern equipment for sit down four-handed dentistry; 2nd has older equipment and used as a spare; Lab, Private office. New modern reception and business areas, shared with two other established dentists; dark room, indoor parking, full air-conditioned. Please reply to CDA Box number 1700.

ONTARIO — Toronto. Two-year-old practice for sale. Located in fast growing area of north suburb. Fully equipped with modern equipment in good working order. Illness forces sale. Reply to CDA Box Number 1689.

ONTARIO — Toronto. General practice for sale in suburban Toronto. Established eight years. Owner returning to school. High gross with wide variety of work. Suitable for one or two dentists. Office recently completely renovated. Three fully equipped Cox operatories with room for two more. Panorex, automatic developer. Available July 1977. Contact: Blair Pollack, phone: (416) 491-7391.

OFFICES AND PRACTICES

PHYSICIAN'S PLACEMENT CENTRE. Dentists are invited to use our matching services. We do have several requests for qualified dentists in various parts of Canada. Write to: Physician Placement Centre Ltd. Lafford, Saskatchewan S0H 2K0. Phone: (306) 472-3104.

BRITISH COLUMBIA — Abbotsford. Dental office for rent in modern professional building in Abbotsford, adjacent to hospital. Panoramic view. Reply: McCallum Terrace Holdings, 2151 McCallum Rd., Abbotsford, B.C. V3S 3N8.

BRITISH COLUMBIA — Penticton. Long established general family practice for sale. Two operatories, lab, dark room, reception area, waiting room, private office, situated in the beautiful Okanagan Valley. Contact: Dr. J. R. Goy, 376 Main St., Penticton, B.C. V2A 5C3. Phone: (604) 492-2709.

BRITISH COLUMBIA — Sunshine Coast. Practice for sale; extremely busy part-time basis with excellent full-time potential. Please reply to CDA Box Number 1697.

BRITISH COLUMBIA — Southern Interior. For sale or lease immediately: rent 5 year practice; 3 operatories fully equipped; High income/low overhead; Modern air-conditioned building. Very reasonable arrangements; Excellent skiing and fishing. Please reply to CDA Box Number 1698.

BRITISH COLUMBIA — Vancouver. Well established, high gross, ultra modern, 3 operator preventive-oriented practice for sale. For details and more information, write to CDA Box Number 1658.

BRITISH COLUMBIA — Vancouver. A vendre: Très bonne pratique générale (spécialité: couronnes et ponts). 1/2 de la clientèle est française. Dans un cadre médical avec médecin français et plusieurs spécialistes. 3 salles d'attente modernes et fonctionnelles. Pratique très rémunérative au centre ville. Ecrivez à ADC casier postal 1705.

BRITISH COLUMBIA — Vancouver. For Sale: Well established general practice specializing in Crown-Bridge. Efficient and modern layout, in Professional Building, strategic location. City centre. Occupied by two dentists, high income. Please reply to CDA Box Number 1705.

FACULTY OF DENTISTRY THE UNIVERSITY OF ALBERTA

OPERATIVE DENTISTRY

The University of Alberta, Faculty of Dentistry, invites applications for a full-time appointment in the Division of Operative Dentistry. This position is open to both men and women.

Duties will include the teaching and supervision of clinical and pre-clinical undergraduate students. Clinical research would be encouraged. An advanced degree, although not a necessity, would be an asset. The successful applicant must be eligible to practise dentistry in the Province of Alberta.

Salary and rank are negotiable dependent upon qualifications and experience. Letters of application along with a curriculum vitae should be sent to:

Dr. W. J. Simpson
Acting Chairman
Department of Clinical Dental Sciences
Faculty of Dentistry
University of Alberta
Edmonton, Alberta, Canada T6G 2N8

PROVINCE OF BRITISH COLUMBIA REGIONAL DENTAL CONSULTANTS

The **Ministry of Health** requires two innovative persons for challenging positions at KELOWNA and SURREY. To act as Consultant to a group of adjacent health units, and co-ordinate the dental health programs of these units within their overall programs, with emphasis on preventive and educational public health dentistry.

Qualifications — A recognized degree in dentistry and eligible to practise dentistry in British Columbia; several years' experience, including at least one year in public health dentistry, or specializing in children's dentistry in private practise.

Salary — \$31,992-\$35,940. Applications considered from candidates *without* DDPH qualifications who are prepared to attain same in due course via educational leave with pay.

Additional information may be obtained from Director, Dental Health Services, Parliament Buildings, Victoria, B.C.

Obtain applications from the Public Service Commission, 544 Michigan Street, Victoria, B.C. V8V 1S3 and return IMMEDIATELY.

Competition No. 77:925

ONTARIO — Toronto. For Sale: Highly profitable, well established practice in modern air-conditioned professional building. Two fully equipped operatories, lab, dark room, private business office, waiting room and private washroom. Owner retiring. Also available 5-bedroom home in highly desirable residential area. Reply to CDA Box Number 1704.

ONTARIO — Toronto. Orthodontic practice for sale. High gross. Reply to CDA Box Number 1703.

ONTARIO — Toronto. Busy general practice for sale in modern suburban Medical-Dental Centre. Two fully equipped operatories. Private office available for third operator. Denture therapist, hygienist and associate also on part-time staff. Present dentist to receive faculty appointment. Reply to CDA Box Number 1699.

QUEBEC — Montreal. Quartier ouest. Pratique générale et préventive établie depuis quatre années. Quatre salles opératoires, deux entièrement équipées. Occasion unique pour un ou deux dentistes. Mille pieds carrés laboratoire commercial voisin. Revenu brut annuel approchant cent mille dollars. Le propriétaire se spécialise. Casier A.D.C. no: 1709.

QUEBEC — Montreal. Four year established general practice in the west end area. Four operatories, two fully equipped. Excellent opportunity for one or two prevention-oriented dentists. One thousand square feet, commercial laboratory next door. Yearly gross income near one hundred thousand dollars. Owner specializing. Please reply to CDA Box number 1709.

QUEBEC — Montréal. Pratique à vendre. Deux salles avec ou sans équipement. Salle d'attente, laboratoire et certains frais partagés avec un autre dentiste. Pratique générale. Quartier centre de Montréal. Ecrire à CDA Box Number 1708.

QUEBEC — Banlieu de Montréal. Bureau comprenant 2 salles opératoires toutes équipées à vendre (prix dérisoire). La clientèle remonte à plus de 70 ans de pratique. Réussite assurée au départ. (514) 773-9343 ou 772-5142.

OPPORTUNITIES AVAILABLE

BRITISH COLUMBIA — Abbotsford. Preventive and perio-oriented group practice requires hygienists. Presently 4 hygienists in practice of 4 dentists. Periodontist now opening office with group and will require 2 hygienists. General dentist in group also requires hygienist. Abbotsford affords hiking, skiing, swimming and boating close by. It is 40 minutes from downtown Vancouver and Pacific ocean beaches. Modern offices and good dentist-hygienist relationships exist. Excellent remuneration and working conditions. All enquiries (call collect) to: Dr. A. R. Shearer, 401 - 2151 McCallum Rd., Abbotsford, B.C. Office: 853-6441; home: 853-1680.

BRITISH COLUMBIA — Vancouver (Burnaby). Hygienist required for a group practice in Burnaby (near Vancouver). Modern office and excellent working conditions. Interest and enthusiasm in prevention programme is important. Salary according to experience and qualifications. Please reply to Dr. Remocker, 4587 East Hastings St., Burnaby, B.C., or call (604) 291-6696.

ALBERTA — Rocky Mountain House. Small town warmth and friendliness available for an intra-oral dental assistant in an extremely modern and friendly 3 operator, one dentist practice in Rocky Mountain House (population 5,000). Job commences in July. Phone: (403) 845-3111 days, (403) 845-2668 evenings, or write: Box 189, Rocky Mountain House, Alta. T0M 1T0.

MANITOBA — Winnipeg. Oral surgeon certified to practise in Manitoba required for a busy Winnipeg practice. Object partnership. Please submit qualifications and curriculum vitae, and recent photo to CDA Box Number 1672.

ONTARIO — Dental Underserved Areas. The Ontario Ministry of Health offers financial support for dentists to establish practices in designated underserved dental areas. Locations are available throughout Ontario. Incentive grants, payable over four years, are \$18,000 in Northern Ontario and \$14,000 in Southern Ontario. Alternatively, a guaranteed net professional income of \$28,000 per annum is offered in Northern Ontario. A limited number of salaried positions are open on mobile dental coaches. Apply to Dental Officer, Program for Underserved Areas, 7 Overlea Blvd., Toronto, M4H 1A9. Phone: (416) 965-5036.

ONTARIO — Windsor. Hygienist wanted for preventive dental practice. We are offering good hours, high salary and relaxed working conditions. Phone: John Thomson anytime: (519) 948-4119 or (519) 735-2263, or write: 2655 Lauzon Rd., Windsor, Ont. N8T 2Z5.

OPPORTUNITY WANTED

ALBERTA-SASKATCHEWAN. British dentist seeks general practice opportunities. Very experienced crown and bridge prosthodontist and part-time specialist lecturer in restorative dentistry, now reverting to general practice. Rural, underserved area would be of interest. Available for locums initially. Reply: Dr. Terence Knight, P.O. Box 78711, Sandton, 2146, Transvaal, South Africa.

SOUTHERN ONTARIO — Dentist and Oral Surgeon: Couple desires associateships in early 1978. Dentist is 1974 University of Toronto graduate with Internship and two years experience in general dentistry. Oral Surgeon 1974 graduate of Ohio State University and is completing residency at Chicago hospital. Both have C.N.B. Reply to CDA Box Number 1682.

ASSOCIATESHIP AVAILABLE

YUKON TERRITORY — Whitehorse Dental Clinic requires two dentists as associates. Good opportunity for experience in all phases of dentistry and very consideration given to pursuing any specialty. Good climate with ample opportunity for enjoying all types of outdoor sport and recreation. Thousands of square miles of scenic splendor still in its primitive state. Address enquiries to: Dr. C. R. Pugh, Whitehorse Dental Clinic, 406 Lambert St., Whitehorse, Y.T.

BRITISH COLUMBIA — Vancouver (Burnaby). Full-time dentist required for a busy four dentist practice. The applicant should expect to be busy and have a good level of experience. Please contact: Dr. Herbert Guenther, 311 Kingsway, Burnaby, B.C. V5H 2B3. Telephone: (604) 437-8681.

BRITISH COLUMBIA — Southern Interior. A very busy clinic is losing a dentist. Practice already established. Immediate full patient load. This is a chance of a lifetime in a most beautiful area. Please call: Dr. D. Fietz collect: (604) 378-2721.

BRITISH COLUMBIA — Vancouver Island. Nanaimo dentist requires associate on expense sharing basis, in downtown office. There are the equivalent of one-and-a-half rooms but lots of work. Available beginning of July 1977. Write to: Dr. L. Lewis, 170 Wallace St., Nanaimo, B.C., or phone: (604) 753-4711.

BRITISH COLUMBIA — Victoria. Young associate dentist required. Four-chair modern operatories. Strictly medical-dental building (opposite Jubilee General Hospital). General anaesthesia privileges. Family-oriented practice. No capital outlay. Reply: Dr. B. Rauch, #310 - 1900 Richmond Ave., Victoria, B.C. V8R 4R2.

BRITISH COLUMBIA. Wanted: Associate for busy general practice near Vancouver. Pleasant seaside location. 1500 sq. ft. new office, Panorex, private garden. All types of dentistry. Phone: Dr. Webb, (604) 886-9110 or (604) 886-7005.

ALBERTA — Edmonton. Modern, spacious, downtown group practice which is patient oriented, providing a congenial staff-dentist relationship, four-handed dentistry, 5 partners, one associate, 3 hygienists, one control therapist, private general anaesthesia area administered by qualified anaesthetist, board room and panorex. The associateship may be considered for one or two years with option for full participation if all parties are compatible. Reply to CDA Box Number 1695.

SASKATCHEWAN — Saskatoon. Full-time associate required in a busy high gross family practice. Two fully modern operatories available to associate in 5-chair office. Possibility of purchase or partnership. Modern, air-conditioned Medical Dental Building. Contact: Dr. R. E. Dickson, 621 Medical Arts Building, Saskatoon, Sask. S7K 3H3, phone: 653-3173 (home).

ONTARIO — Associate wanted for well established and extremely busy modern dental office in pleasant rural community. Pollution free surroundings with many lakes and exceptional scenery — everything to offer for the outdoor enthusiast, and only five hours drive from Toronto. Hospital affiliation is available; Excellent opportunity to practise comprehensive preventive dentistry. Please reply to CDA Box number 1701.

ONTARIO — Eastern Ontario City. Progressive group requires associate for a full-time general practice, in pleasant surroundings. Reply to CDA Box Number 1707.

ONTARIO — Hamilton. Associate wanted part-time. Downtown preventive general practice, four handed and six handed dentistry, hygienist services, oral hygiene programme, analgesia, panelipse, emphasis on humanistic approach to patient care. Associate to use new Cox operatory. Please phone: Dr. Larry Levin: 529-2421, or 639-0430 evenings.

QUEBEC — Lachine. Demandons Associé, bureau moderne, ouest de Montréal; patients fournis/ Associate needed, modern efficient office, cox system, patients provided. S.V.P. appliquer à/ Apply to: Associé/ Associate, 800 Lakeshore Drive, Apt. 59, Dorval, Montreal.

EQUIPMENT FOR SALE

BRITISH COLUMBIA — Nanaimo. For Sale: Matching jade green and white Ritter Vega Power Chair and Weber Versalette Unit and Castle Lamp. Unit features detachable cuspidor, two tri-flo syringes, bracket table, cup filler, saliva ejector, and connectors for vacuum plus hydro-colloid. \$3,000.00. Contact: Dr. J. W. Tarr, 170 Wallace Street, Nanaimo, B.C. V9R 5B1, Telephone 753-5251.

QUEBEC — Tracy. A vendre. Appareil de radiographie panoramique dentaire tout équipé. Panelipse de General Electric. Usage 6 mois. Pour information écrire à Clinique de Radiologie Sorel Tracy, 3215 Boul. des Erables, Tracy, P.Q. J3R 2W6. Tél.: 742-0433.

ONTARIO — London. Kavo chair SE 3050, three control switches built into back rest. Four-years-old, excellent condition. Off white in colour. \$1,700.00. Phone: (519) 672-1190.

VACATION RENTAL

FLORIDA — Port Charlotte. Luxurious 1 or 2 bedroom condominiums. All conveniences: Swimming pool, tennis, shuffle court. Near golf course, shopping mall, health spa. Weekly, monthly, seasonal. For further information, contact: Dr. W. Madronich, 275 Hixon Rd., Hamilton, Ont. Phone: (416) 561-9243.

MISCELLANEOUS

DENTAL HOLIDAYS — Charter Boat — "ONTARIO RED" — 23 ft. inboard with full living-on facilities. Scuba Trips, Water Skiing, Salmon Fishing, West Coast Cruising. Dr. Derek Duvall. Office (604) 338-5381. Res. (604) 339-4272.

BRITISH COLUMBIA — Vancouver. Mix work and pleasure with a mobile dental unit/vacation home by purchasing this 31' camperized greyhound bus. It is completely self-contained with power, water, and air, is completely outfitted as a dental office for use in rural areas, and is ideal for recreational purposes as it is easily converted into a comfortable mobile home. All enquiries: (604) 926-6051 before 6:00 p.m.

OPPORTUNITY MEDICINE HAT, ALBERTA

Medical Dental space available in new neighbourhood Shopping Plaza serving 10,000 local area residents. Only minutes away from all other districts in a city of 33,000. There presently is no dentist in this area. The opportunity to establish a practice was never better. Medicine Hat is a growing city located in southeastern Alberta on the Trans Canada Highway. Several daily air service flights to Calgary and other points plus CPR Rail service. For further information, please contact:

**Wayne Bobroff
Villa Real Estate & Development Ltd.
7732 MacLeod Trail South
Calgary, Alta.
Tel: (403) 252-7826**

CHAIRMAN
DEPARTMENT OF CLINICAL
DENTAL SCIENCES
UNIVERSITY OF ALBERTA

Men and women are invited to apply for the position of Chairman, Department of Clinical Dental Sciences. Departmental programs include preclinical and clinical undergraduate and graduate teaching.

The Chairman shall be the chief executive officer of the Department for an initial five year term. Rank and salary will be commensurate with experience and qualifications. Applicants should be eligible for licensure in the Province of Alberta. Intramural private part-time practice is available. The position available will be commencing July 1, 1977.

Enquiries and applications should be forwarded to:

**Dr. D. M. Collinson, Acting Dean and
Chairman, Selection Committee,
Faculty of Dentistry,
University of Alberta
Edmonton, Alberta T6G 2N8**

Volunteer Dentists Needed In Dominican Republic

Dentists are needed as volunteers for a month or more in the CARE/MEDICO program in the Dominican Republic to assist in teaching Dominican student dentists at the University Dental School in Santa Domingo. Volunteers pay their own travel and per diem expenses which are deductible from income tax. In-country transportation is provided and wives are welcome. Further information may be obtained from:

**Mr. George Mathues
Director
Medical Volunteer Specialists
CARE/MEDICO
2007 Eye St. N. W.
Washington, D.C. 20006
Telephone: (202) 223-2277**

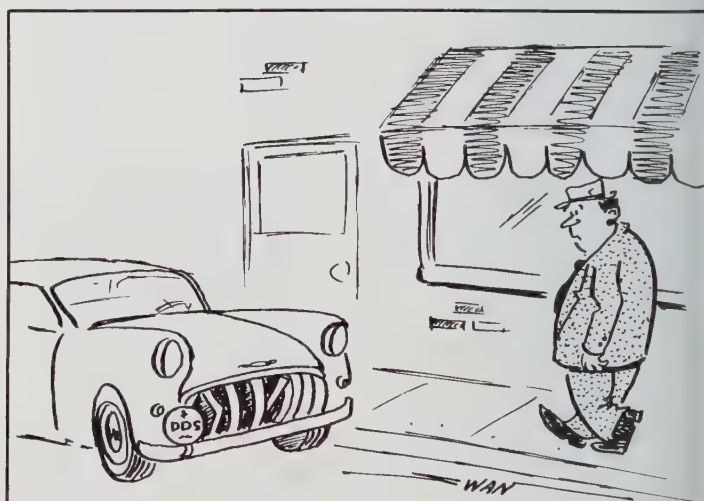
ADVERTISERS' INDEX

Block Drug Company Canada	257, 288
John O. Butler	255
The L. D. Caulk Co. of Canada	283, 284
Colgate Palmolive Ltd.	268
Commerce Drug	IBC
Denco	272
Dentsply International	252, 258, 259, 271, 277
Charles E. Frosst	263
C. V. Mosby	287
Nobilium	261
Novocol	267
Pelton and Crane	OBC
Pfingst	286
Procter and Gamble	251
Whaledent International	IFC
S. S. White	264, 265

Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.

PROSTHODONTICS

University of Manitoba, Faculty of Dentistry has available a full-time appointment in Complete and Removable Partial Prosthodontics. The position requires teaching expertise in laboratory and clinical components and active participation in research. Candidates with graduate education preferred. Salary commensurate with qualifications and experience. Applicants to write to **Dr. P. M. Jackin, Head, Department of Rehabilitative Dental Science, Faculty of Dentistry, 780 Bannatyne Ave., Winnipeg, Man. R3E 0W3.**



REGISTRATION FORM

5 TH ANNUAL
WORLD DENTAL CONGRESS
FEDERATION
DENTAIRE INTERNATIONALE



TORONTO
CANADA

22-28
OCTOBER
1977

For advance registration return one copy with appropriate fees before
September 14, 1977; otherwise register at Congress.

Return to: 1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario, M5W 1X3
CANADA.

PLEASE TYPE OR USE BLOCK LETTERS; WHERE APPLICABLE CIRCLE APPROPRIATE RESPONSE

SURNAME: _____ INITIALS: _____ Prof./Dr./Mr./Mrs./Miss _____

ADDRESS: _____

COUNTRY: _____ Language for documents: English / French / German / Spanish

FDI MEMBERSHIP:

Are you a supporting member of the FDI YES/NO

MEMBERSHIP REGISTRATIONS

F.D.I. Supporting Member — \$100 before or \$120 after July 1 _____ \$ _____

Canadian Dental Association (Non FDI) Member \$115 before or \$130 after July 1 _____ \$ _____

ADDITIONAL REGISTRATIONS (\$10 each; no fee for spouse or other family member)

REGISTRANT: _____ SURNAME: _____ INITIALS: _____

Spouse: _____

Family member: _____

Auxiliary: _____ \$ _____

Student: _____ \$ _____

MILITARY PERSONNEL ONLY

Rank: _____

Attending Military Conference and Field Visit to Base Borden — on Thurs., October 20 YES/NO accompanied YES/NO

SOCIAL PROGRAM

Congress Ball — Tues., October 25. (\$30. per person; limited attendance) _____ \$ _____

Canadian Hoedown — Fun Night — Wed., October 26. (\$15. per person) _____ \$ _____

LADIES PROGRAM

Fashion Show and Luncheon — Mon., October 24. (\$12.50 per person) _____ \$ _____

Sightseeing Tours — English Commentary

Toronto City — mornings — specify day. Mon./Tues./Wed./Thurs.
(\$6 per person) _____ \$ _____

Toronto City and Harbour (bus and boat) — mornings — specify day. Mon./Tues./Wed./Thurs.
(\$7 per person) _____ \$ _____

Niagara Falls — all day — specify day Mon./Tues./Wed./Thurs.
(\$22 per person including lunch) _____ \$ _____

McMichael Canadian Art Gallery — 5 hours. Tues., October 25
(\$12 per person including lunch) _____ \$ _____

Antique — all day Thurs., October 27
(\$19 per person including lunch) _____ \$ _____

TOTAL FEES (CANADIAN \$ ONLY) _____ \$ _____

MAKE CHEQUES OR MONEY ORDERS PAYABLE TO FDI/CDA WORLD DENTAL CONGRESS

CANCELLATION CLAUSE

Ten per cent will be deducted from registration fees of registrants cancelling up to two months before the Congress and 20 per cent from those cancelling up to one month before the meeting. Money paid for social events by those not attending the meeting will be repaid in full. Money will not be refunded for tickets which cannot be resold during the Congress.

PRE AND POST CONGRESS TOURS

If you are interested in detailed information concerning Pre and Post Convention tours, please check here ☐

SIGNATURE _____ DATE _____

65ème CONGRES DENTAIRE MONDIAL ANNUEL FEDERATION DENTAIRE INTERNATIONALE



TORONTO CANADA

 du 22 a
OCTOB
1977

Pour s'inscrire à l'avance, veuillez renvoyer un exemplaire avec le montant exact des droits au plus tard le 14 septembre 1977; après cette date, il faut s'inscrire pendant le Congrès.

Renvoyer à: 1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A,
Toronto, Ontario, M5W 1X3
CANADA.

VEUILLEZ DACTYLOGRAPHIER OU UTILISER DES LETTRES MAJUSCULES; SI NECESSAIRE VEUILLEZ ENTOURER LA REPONSE CORRECTE.

NOM _____ INITIALES _____ Prof./Dr./M./Mme/Melle _____

ADRESSE _____

PAYS _____ Langue pour les documents: Allemand / Anglais / Français / Espagnol

MEMBRE DE LA FDI:

Etes-vous membre sympathisant de la FDI OUI/NON

INSCRIPTIONS DES MEMBRES

Membre sympathisant de la FDI — \$100 avant le 1er juillet et \$120 après _____ \$

Membre de l'Association Dentaire canadienne (non FDI) \$115 avant le 1er juillet ou \$130 après _____ \$

INSCRIPTIONS SUPPLEMENTAIRES (\$10 chacune: gratuit pour les époux (ses) autres membres de la famille)

PARTICIPANT NOM: INITIALES

Epoux(se): _____ \$

Membre de la famille: _____ \$

Auxiliaire: _____ \$

Etudiant: _____ \$

PERSONNEL MILITAIRE UNIQUEMENT

Grade: _____

Assistera à la Conférence Militaire et la visite à la Base Borden — le jeudi 20 octobre OUI/NON accompagné OUI/NON

PROGRAMMES DES FESTIVITES

Bal du Congrès — Mardi 25 octobre. (\$30 par personne; participation limitée) _____ \$

Canadian Hoedown — "Nuit de rigolades" — Mercredi 26 octobre (\$15 par personne) _____ \$

PROGRAMME DES DAMES

Défilé de modes et déjeuner — Lundi 24 octobre (\$12.50 par personne) _____ \$

Visites guidées — commentaires en anglais

Cité de Toronto — matinées — préciser le jour. lun./mar./mer./jeudi
(\$6 par personne) _____ \$

Cité et port de Toronto (autobus et bateau) — matinées — préciser le jour. lun./mar./mer./jeudi
(\$7 par personne) _____ \$

Chutes du Niagara — toute la journée — préciser le jour lun./mar./mer./jeudi
(\$22 par personne, déjeuner compris) _____ \$

Galeries d'art canadien McMichael — 5 heures. mardi 25 octobre
(\$12 par personne, déjeuner compris) _____ \$

Antiquités — toute la journée jeudi 27 octobre
(\$19 par personne, déjeuner compris) _____ \$

**MONTANT TOTAL (\$ CANADIENS
UNIQUEMENT) _____ \$**

ADRESSER LES CHEQUES OU LES MANDATS DE PAIEMENT A L'ORDRE DE FDI/CDA WORLD DENTAL CONGRESS

CLAUSE D'ANNULATION

On déduira dix pour cent des droits d'inscription des participants qui annuleront deux mois, au moins, avant le Congrès et 20 pour cent des droits d'inscription pour ceux qui annuleront un mois, au moins, avant la session. On remboursera à ceux qui n'auront pas assisté au Congrès la totalité des sommes versées pour le programme des festivités. On ne remboursera pas toutefois le prix des billets qui n'auraient pu être revendus pendant le Congrès.

VISITES ANTERIEURES ET POSTERIEURES AU CONGRES

Si vous désirez recevoir des renseignements détaillés sur les visites antérieures et postérieures au Congrès, veuillez faire une marque ici ☐

SIGNATURE _____ DATE _____

HOTEL RESERVATION FORM

**65 TH ANNUAL
WORLD DENTAL CONGRESS
FEDERATION
DENTAIRE INTERNATIONALE**



**TORONTO
CANADA**

22-28
OCTOBER
1977

One copy to be returned with appropriate fees and the registration form before September 14, 1977 to:—

1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario M5W 1X3
Canada

For room reservations, please print or type three choices

1st _____
2nd _____
3rd _____

Please enter my reservations at the above hotel for:

Singles **Twin/
Doubles** **1 Bdrm.** **Suites** **2 Bdrm.**

☐ @ \$ _____ ☐ @ \$ _____ ☐ @ \$ _____ ☐ @ \$ _____

If rate requested is not available, the next highest will be assigned.

Please **DO NOT** send your request directly to the HOTEL;
it **WILL ONLY DELAY** your confirmation. Please allow
two — three weeks to receive confirmation.

Room will be occupied by (please print or type)

Name _____

Street _____

City _____ State _____ Zip _____

Additional Occupants _____

Date Arriving _____ AM
PM _____

Departing _____

THE DEADLINE FOR MAKING ADVANCE RESERVA-
TIONS IS SEPTEMBER 14, 1977.

Hotel	Single	Double/Twin	1-Bed Suite	2-Bed Suite
1. Royal York (Hdqs.)	\$35	\$45	\$70 - \$135 (Studio suites \$60 - \$70)	
2. Sheraton Centre	\$33 \$38 \$43 (Cabanas \$59)	\$40 \$47 \$52	\$85 to \$153 (Hosp. Suites \$163 to \$203)	\$128 to \$196
3. Harbour Castle Hilton	\$35	\$42	\$70 - \$95	\$137
4. King Edward	\$20	\$24 \$26	\$38	\$70
5. Lord Simcoe	\$20	\$25		
6. Hotel Toronto	\$35	\$45	\$92 \$102	\$132 \$152 Add \$10 for double occupancy
7. Holiday Inn Toronto Downtown	\$30	\$39 \$42		
8. Bond Place	\$20	\$24		
9. Chelsea Inn	\$25	\$29		
10. Carlton Inn	\$17	\$21		
11. The Westbury	\$29.50	\$36.50		
12. Sutton Place	\$36.50	\$44.50		
13. Town Inn	\$29	\$34		
14. Park Plaza	\$34	\$38		
15. Hyatt Regency	\$38	\$45		
16. Hotel Plaza II	\$28	\$35		(Suites upon request \$75 - \$250)
17. Inn On The Park	\$38	\$46		
18. Prince	\$34	\$40		
19. Holiday Inn Don Valley	\$32	\$42		
20. Ramada Inn - Toronto	\$29.50	\$36.50		
21. Bristol Place	\$33.50	\$35.50		
22. Cara Inn	\$28	\$35		
23. Constellation	\$34	\$42		
24. Skyline	\$30	\$36		
25. Toronto Airport Hilton	\$29 - \$37	\$37 - \$45		

Each of the above rates is quoted in Canadian Currency. Ontario sales tax — 7% not included.

WE STRONGLY URGE THAT YOU MAKE YOUR HOUSING RESERVATIONS EARLY, PARTICULARLY IF YOU PLAN TO ARRIVE ON SATURDAY. STATISTICS FROM THE TORONTO TOURIST INDUSTRY INDICATE A HEAVY INFLUX ON OCTOBER WEEKENDS.

(Please make all changes and cancellations in writing directly to the Organizing Committee).

Note: FDI business meetings and a portion of the scientific program will take place at the Royal York Hotel. The Dental Trade Show and other portions of the scientific program will take place at the Automotive Building, Exhibition Place.

FORMULAIRE DE RESERVATION DES CHAMBRES D'HOTEL

**65ème CONGRES
DENTAIRE MONDIAL ANNUEL
FEDERATION
DENTAIRE INTERNATIONALE**



**TORONTO
CANADA**

du 22
OCTO
1977

Prière de renvoyer un exemplaire avec le montant exact des droits et le bulletin d'inscription au plus tard le 14 septembre 1977 à l'adresse suivante:

1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A,
Toronto, Ontario M5W 1X3
CANADA

Pour les chambres d'hôtel, veuillez indiquer trois possibilités
(écrire ou dactylographier)

1er _____

2ème _____

3ème _____

Veuillez me réserver à l'hôtel ci-dessus de(s) chambre(s) :

Individuelle(s) à lits jumeaux/
lit double Suite(s) 1 Ch. 2 Ch.

☐ @ \$ _____ ☐ @ \$ _____ ☐ @ \$ _____ ☐ @ \$ _____

Si le tarif demandé ne peut être offert, le tarif immédiatement supérieur sera attribué.

Veuillez NE PAS envoyer votre réservation directement à l'HOTEL; cela NE FERA QUE RETARDER votre confirmation. Veuillez compter deux à trois semaines avant de recevoir votre confirmation.

La chambre sera occupée par (veuillez écrire ou dactylographier).

Nom _____

Rue _____

Ville _____ Etat _____ Code postal _____

Autres occupants _____

Date d'arrivée _____ AM
PM _____

date de départ _____

LES RESERVATIONS NE SERONT PLUS ACCEPTEES A
LE 14 SEPTEMBRE 1977.

Hôtel	Indiv.	L.jumeaux/ L. doubles	Suites 1 Ch.	Suites 2 Ch.
1. Royal York (Sec.G1.)	\$35	\$45	\$70 - \$135 (suites studio \$60 - \$70)	
2. Sheraton Centre	\$33 \$38 \$43 (Cabanas \$59)	\$40 \$47 \$52	\$85 à \$153 \$128 à \$196 (Suites Hosp. \$163 à \$203)	
3. Harbour Castle Hilton	\$35	\$42	\$70 - \$95	\$137
4. King Edward	\$20	\$24 - \$26	\$38	\$70
5. Lord Simcoe	\$20	\$25		
6. Hotel Toronto	\$35	\$45	\$92 \$102	\$132 \$152 Ajouter \$10 pour deux occupants
7. Holiday Inn Toronto Downtown	\$30	\$39 \$42		
8. Bond Place	\$20	\$24		
9. Chelsea Inn	\$25	\$29		
10. Carlton Inn	\$17	\$21		
11. The Westbury	\$29.50	\$36.50		
12. Sutton Place	\$36.50	\$44.50		
13. Town Inn	\$29	\$34		
14. Park Plaza	\$34	\$38		
15. Hyatt Regency	\$38	\$45		
16. Hotel Plaza II	\$28	\$35		(Suites sur demande \$75 - \$250)
17. Inn On The Park	\$38	\$46		
18. Prince	\$34	\$40		
19. Holiday Inn Don Valley	\$32	\$42		
20. Ramada Inn - Toronto	\$29.50	\$36.50		
21. Bristol Place	\$33.50	\$35.50		
22. Cara Inn	\$28	\$35		
23. Constellation	\$34	\$42		
24. Skyline	\$30	\$36		
25. Toronto Airport Hilton	\$29 - \$37	\$37 - \$45		

Les tarifs ci-dessus sont indiqués en devises canadiennes. La taxe l'Ontario sur les ventes de 7% n'est pas comprise dans les prix

NOUS VOUS RECOMMANDONS VIVEMENT DE FAIRE VOS RESERVATIONS DE CHAMBRES D'HOTEL ASSEZ TÔT, EN PARTICULIER SI VOUS AVEZ L'INTENTION D'ARRIVER UN SAMEDI. LES STATISTIQUES, FOURNIES PAR L'INDUSTRIE TOURISTIQUE DE TORONTO INDIQUENT UNE AFFLUENCE IMPORTANTE PENDANT LES WEEK-ENDS D'OCTOBRE.

(Veuillez procéder à tous les changements et annulations, en écrivant directement au Comité d'organisation.)

Note: Les réunions administratives de la FDI et une partie du programme scientifique se dérouleront au Royal York Hotel. L'exposition de l'industrie dentaire et l'autre partie du programme scientifique se tiendront à l'Automotive Building Exhibition Place.

ora-jel-D[®]

The professional denture anesthetic, antiseptic cream saves you chair time.

During the initial new dentures break-in period, patients encounter discomfort that can mean time-consuming office visits to you. Ora-Jel D can be an invaluable aid in your practice. Ora-Jel D starts relieving pain on application. It soothes irritated tissue — without masking the problem. Provides long-lasting pain relief during the critical denture adjustment period and builds patient confidence.

For all dentures, Ora-Jel D makes adjustment easier and faster because it eases pain. Ora-Jel D works just as effectively to relieve soreness and irritation caused by orthodontic appliances.

Ora-Jel D is an easy to use cream that your denture patients can apply at home — to relieve the pain of denture irritation. It also offers anesthetic and antibacterial action. And the relief lasts for hours.

Mail coupon for free professional sample. Ora-Jel D saves time at the chair and keeps problem patients happy.

COMMERCE DRUG (CANADA) LTD.

Dept. # J.C.D.A.

9190 Charles de Latour St.,
Montreal 355, Canada

Name _____

Address _____

Zip _____

DENTAL LIBRARY
124 EDWARD ST.
TORONTO 2

DENTAL LIBRARY
124 EDWARD ST.
TORONTO 2

DENTAL LIBRARY
124 EDWARD ST.
TORONTO 2

DENTAL LIBRARY
124 EDWARD ST.
TORONTO 2

FIRST AID TO THE HEALING ARTS.



The Sentry by Pelton & Crane.

Incorporates the newest in electro-mechanical technology in an autoclave of reliability and safety. Heavily insulated stainless steel chamber, stay-cool door and handle, and unique safety door lock offer maximum protection to the operator. Accurate solid state control maintains precise settings of steam pressure and temperature. Smartly designed for easy operation and maintenance.

The Sentry. One of a group of Pelton & Crane products for effective dental practice with demonstrable advantages over others in the field. Advantages that could have great advantages for you.



Pelton & Crane
P.O. BOX 3664 CHARLOTTE, N.C. 28203

DENTAL JOURNAL DENTAIRE

Si non livrable
au destinataire
**RETOURNER A
L'EXPEDITEUR**
Port Payé

If undeliverable
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed

July/Juillet 1977/Volume 43/No 7

Canadian Dental Association/Association Dentaire Canadienne



In this issue:

Research in dentistry

Secondary osteoarthritis of
the temporomandibular joint

A direct technique for
post-core castings

Persisting maxillary diastema:
differential diagnosis
and treatment

Pathologie de l'articulation
temporo mandibulaire



“...but
if you feel
any pain,
take one or two
222* tablets.”

Not every patient needs an analgesic after dental care — but some do, even though you have done everything possible to avoid any patient discomfort.

When a patient is in pain, or when there is a possibility that pain will occur later, suggest 222* tablets.

222* is a reliable analgesic — you and your patient can depend on it.

INDICATIONS: For relief of mild to moderate pain, fever and inflammation as in influenza, common cold, low back and neck pain, headache, trauma, following dental and surgical procedures.

DOSAGE: Adults — 1 or 2 tablets one to three times daily; Children's dosage, when recommended by a physician: 10 to 14 years, one tablet, one to three times daily; 5 to 10 years, one-half tablet, one to three times daily.

CONTRAINDICATIONS: Gastrointestinal ulceration and sensitivity to any of the components.

WARNINGS: Salicylates increase the effects of anticoagulants. Caution is necessary when salicylates and anticoagulants are prescribed concurrently. Also, salicylates may depress the concentration of prothrombin in the plasma. Large doses of salicylates may affect insulin requirements of diabetics. Salicylates may potentiate sulfonamide hypoglycemic agents. Analgesic abuse (excessive and prolonged therapy) has been associated with nephropathy. TO AVOID

ACCIDENTAL POISONING ACETYSALICYLIC ACID PREPARATIONS MUST BE KEPT WELL OUT OF REACH OF CHILDREN.

PRECAUTIONS: Give with caution to patients with asthma, other allergic conditions, bleeding tendencies, or hypoprothrombinemia. Salicylates can produce changes in thyroid function tests.

Observe care in use of codeine, although tolerance and addiction are rare. Give codeine with caution to patients with severe respiratory depression. Its depressant effect may be enhanced by concurrent administration of sedatives and tranquilizers.

ADVERSE REACTIONS: Acetylsalicylic acid: *Gastrointestinal:* dyspepsia, heartburn, nausea, vomiting, diarrhea, gastrointestinal ulceration and bleeding. *Ear reactions:* tinnitus, hearing loss. *Hematologic:* anemia, leukopenia, thrombocytopenia, purpura. *Dermatologic and Hypersensitivity:* urticaria, angioedema, pruritus, various skin eruptions, asthma and anaphylaxis. *Miscellaneous:* mental confusion, drowsiness, sweating and thirst.

Codeine: Average or large doses may cause various gastrointestinal symptoms such as nausea, vomiting and constipation.

Caffeine: May cause nausea, nervousness, insomnia, headache, vomiting, palpitation, vertigo, muscle tremor, sensory disturbances, excessive diuresis in sensitive patients. Large doses may cause gastric ulceration.

FULL INFORMATION AVAILABLE ON REQUEST

HOW SUPPLIED

222* Tablets — White, scored, engraved 222 on one side. Each tablet contains: acetylsalicylic acid 375 mg, caffeine citrate 30 mg, codeine phosphate 8 mg. Available in tubes of 12; bottles of 40 and 100; also bottles of 60 with safety cap.

*Trademark



(MC-390a)

Frosst
FOUNDED IN CANADA IN 1899
CHARLES E. FROSST & CO.
KIRKLAND (MONTREAL) CANADA

Tested & Trusted

Crest effectiveness has been proven in more clinical tests under more conditions than any other fluoride dentifrice

Percent DMFS Reduction*

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Normal home usage—young adults—J.A.D.A. 55:196, 1957



Normal home usage—young adults—J.A.D.A. 63:189, 1961



Normal home usage—children—J.A.D.A. 50:163, 1955



Normal home usage—children—J.A.D.A. 51:556, 1955



Normal home usage—children—J.A.D.A. 64:216, 1962



Normal home usage—children—J.A.D.A. 72:408, 1966



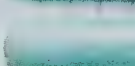
Normal home usage—children—J. Canad. Dent. Assn. 36:262, 1970



Normal home usage—children—J. Dent. Child. 37:501, 1970



Normal home usage—children—J. Canad. Dent. Assn. 38:35, 1972



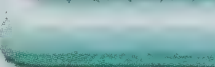
Normal home usage—children—J. Canad. Dent. Assn. 38:155, 1972



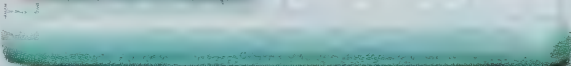
Fluoridated water—children—J. Dent. Child. 38:211, 1971



Supervised brushing—children—J.A.D.A. 58:42, 1959



Supervised brushing—children—J.A.D.A. 64:217, 1962



Supervised brushing—children—J.A.D.A. 65:482, 1962



SnF₂ topical—children—J. Dent. Child. 28:5, 1961



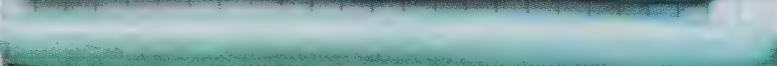
SnF₂ topical and prophylaxis—children—J.A.D.A. 70:914, 1965



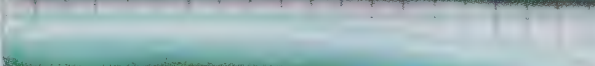
SnF₂ topical and prophylaxis—children—J.A.D.A. 72:392, 1966



SnF₂ topical and prophylaxis—adults—J.A.D.A. 75:1402, 1967



SnF₂ topical and prophylaxis—adults—J.A.D.A. 77:594, 1968



"Crest has been shown to be an effective decay-preventive (anti-caries) dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."—Canadian Dental Association

For further information on these clinical studies, write to Crest Professional Services Division, P.O. Box 355, Terminal A, Toronto, Ontario

Confidence based on research=Crest

(DMFS) New decayed, missing, or filled surfaces. All clinical studies conducted vs. null control. The control dentifrice was Crest without its stated actives.

©1973 PROCTER & GAMBLE, TORONTO

CAS-380



In the natural beauty of a daisy there is a simple logic: a harmony of form, size, color and arrangement.

The Trubyte System uses the same logic to provide the point of departure for a beautiful denture.



Trubyte Bioblend Anteriors...expressions
a simple, natural logic.

TRUBYTE

Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1977 Dentsply International, Inc.
All rights reserved.

JOURNAL

of the Canadian Dental Association
de l'Association Dentaire Canadienne
July/Juillet 1977/Volume 43/No 7

PUBLISHER/Canadian Dental Association
SCIENTIFIC EDITOR/R. S. Turnbull, DDS
EDITOR/Diane Charter
FRENCH SCIENTIFIC EDITOR/Robert Lambert, DDS

MANAGING EDITOR/ADVERTISING/Anna Spencer
EDITORIAL SECRETARY/Mary Maxwell
CLASSIFIED ADVERTISING/Marie Cosgrave
CIRCULATION/Cathy Cronin

ISSN 0382-8514

Regular Features

Announcements	304
Letters to the editor	306
Les actualités dentaires	308
Dentistry in the news	312
Deaths	314
FDI/CDA Congress News	316

Articles

Why Research? — Beagrie	320
Secondary osteoarthritis (osteoarthritis) of the temporomandibular joint — Brooke	323
Pathologie de l'articulation temporo mandibulaire — Morency	326
A direct technique for post-core castings — Metrick	329
Persisting maxillary diastema: differential diagnosis and treatment — Popovich, Thompson and Main	330

Classified advertising	334
------------------------	-----

Advertisers' index	338
--------------------	-----

Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1977 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454.

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association.

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1977 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22).

Veuillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences. Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise.

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Canadian Dental Association, 1977, Toronto, October 22-28.

Fédération Dentaire Internationale 65th Annual World Dental Congress, 1977, Toronto, October 22-28. FDI/CDA Congress Office: P.O. Box 6423, Terminal A, Toronto, Ontario M5W 1X3.

Canadian Meetings

Canadian Association of Orthodontists, Annual Meeting, Hyatt Regency Hotel, Toronto, October 20-23, 1977, just prior to the FDI World Dental Congress. Contact: Dr. J. Schachter, P.O. Box 952, Saskatoon, Canada S7K 3M4.

Canadian Academy of Restorative Dentistry, Park Plaza Hotel, Toronto, October 21-22, 1977, just prior to the FDI World Dental Congress. Contact: Dr. D. B. McAdam, Associate Professor, Department of Restorative Dentistry, University of Toronto, 124 Edward St., Toronto, M5G 1G6.

Canadian Dental Hygienists Association, Annual Meeting, Bond Hotel, Toronto, October 23-27, 1977, in conjunction with the FDI World Dental Congress.

Canadian Dental Nurses and Assistants Association, Annual Meeting, Holiday Inn, Civic Square, Toronto, October 23-27, 1977, in conjunction with the FDI World Dental Congress.

Canadian Society of Oral Surgeons, Annual Convention, Hyatt Regency Hotel, Toronto, October 28-31, 1977, following the FDI World Dental Congress. Contact: Dr. W. Prusin, Convention Chairman, 919 Ellesmere Rd., Scarborough, Ontario M1P 2W7.

Canadian Academy of Endodontics, Annual Meeting, Hyatt Regency Hotel, Toronto, October 29-30, 1977, following the FDI World Dental Congress. Contact: Dr. J. M. Phillips, 12½ Simcoe St. South, Oshawa, Ontario L1H 4G2.

Canadian Society of Forensic Science, Odontological Section, Chateau Lacombe, Edmonton, November 3-5, 1977. Contact: Dr. R. B. J. Dorion, Suite 710-D, Sun Life Building, Montreal, Quebec H3B 2V6.

Montreal Dental Club Pre-Convention Seminar, Queen Elizabeth Hotel, Montreal, November 12-13, 1977. Contact: Miss M. Komarnicka, 55 LaFleur St., Ville La Salle, Quebec H8R 3G7.

Montreal Dental Club Fall Clinic, Queen Elizabeth Hotel, Montreal, November 14-16, 1977. Contact: Miss M. Komarnicka, 55 LaFleur St., Ville La Salle, Quebec H8R 3G7.

Les Journées Dentaires du Québec, Quebec Hilton Hotel, Quebec City, May 28-31, 1978. Contact: Dr. R. M. Lang, 5171 Decarie Blvd., Montreal, Quebec H3W 3C2.

Pacific Dental Federation Convention, Vancouver, July 23-26, 1977. Contact: Dr. Ken Neuman, President, Pacific Dental Federation, 1125 West 8th Avenue, Vancouver, British Columbia V6H 3N4.

International Meetings

Hungarian Dental Association, 12th Congress, Pécs, Hungary, August 25-27, 1977. Contact: Professor I. Szabo, 7621 Pécs, Dischka Gyozo u.5. Hungary.

New Orleans Dental Conference, sponsored by the New Orleans Dental Association, Hyatt Regency Hotel, New Orleans, September 15-18, 1977. Contact: New Orleans Dental Conference, 2121 North Causeway Blvd., Suite 272, Metairie, Louisiana 70001. Phone: (504) 834-6449.

International Epidemiological Association, 8th International Scientific Meeting, Las Croabas, Puerto Rico, September 18-20, 1977. Contact: Dr. Carlo Luis Gonzalez, Program Secretary, Universidad de Los Andes, Facultad de Medicina, Centro de Estudios de Post-Grado, Merida-Venezuela.

International Association for Orthodontics, Annual Meeting, Bayshore Inn, Vancouver, British Columbia, September 21-25, 1977.

Dental Association of South Africa, 5th International Scientific Congress, Stellenbosch, Republic of South Africa, September 26-30, 1977. Contact: Dr. L. S. Maresky, Congress Secretary, P.O. Box 96, 7503 Parowvallei, C.P., South Africa.

American Academy of Periodontology, 63rd Annual Session, Sheraton-Boston Hotel, Boston, Massachusetts, October 5-8, 1977. Contact: American Academy of Periodontology, 211 East Chicago Ave., Room 924, Chicago, Illinois 60611.

American Dental Association, 118th Annual Session, Miami Beach Convention Centre, Florida, October 9-13, 1977. Contact: American Dental Association, 211 East Chicago Ave., Chicago, Illinois 60611.

Society for Clinical and Experimental Hypnosis, 29th Annual Workshop

and Scientific Program, Hyatt House Hotel, Los Angeles, October 11-16, 1977. Contact: Mrs. Marion Kenn, Administrative Director, SCEH, 129A Kings Park Drive, Liverpool, New York 13088.

American Society of Clinical Hypnosis, Annual Workshop and Scientific Meeting, Omni International Hotel, Atlanta, Georgia, October 16-22, 1977. Contact: William E. Hoffman Jr., Executive Director, Suite 218, 2400 East Devon Ave., Des Plaines, Illinois 60018.

Fédération Dentaire Internationale, 65th Annual World Dental Congress, Toronto, October 22-28, 1977. Contact: FDI/CDA Congress Office, P.O. Box 6423, Terminal A, Toronto, Ontario M5W 1X3.

Winter Medical-Dental Assembly, New Stanley Hotel, Nairobi, Kenya, East Africa, October 28-November 18, 1977. Contact: Dr. Anthony T. Wachna, North American Chairman, 504 Medical Arts Building, Windsor, Ontario N9A 4J9. Phone: (519) 253-9393.

American Institute of Oral Biology, 34th Annual Meeting, Spa Hotel, Palm Springs, California, November 4-8, 1977. Contact: Executive Secretary, P.O. Box 481, South Laguna, California 92677.

French Dental Association, 1977 National Congress, Congress Hall, International Centre in Paris, November 23-26, 1977. Contact: Alain Deyrolle, Secretary General, French Dental Association, 19 bis, rue Legendre, 75017 Paris.

East Coast District Dental Society, Miami Winter Meeting, Fontainebleau Hotel, Miami Beach, January 15-18, 1978. Contact: Barbara Sims, Executive Director, East Coast District Dental Society, 2 S.E. 13th Street, Miami, Florida 33131.

8th Paulista Convention of Odontology and 10th Latin American

Seminar of Odontology, Sao Paulo, Brazil, January 21-28, 1978. Contact: Dr. Edmir Matson, General Secretary, Rua Humaitá 389, Caixa Postal 2523, CEP 01321, Sao Paulo, Brazil.

Australian and New Zealand Societies of Periodontology, Combined Meeting, Melbourne, Australia, February 9-10, 1978. Contact:

Dr. Lloyd G. O'Brien, 147 Collins St., Melbourne, Victoria 3000, Australia.

Australian Dental Association, Jubilee Congress, Melbourne, February 12-16, 1978. Contact: Dr. D. Behrend, Honorary Secretary, 1978 Jubilee Dental Congress, P.O. Box 29, Parkville, Victoria 3052, Australia.

Continued on page 306

Vital Statistics

Featured in a recent dental survey was the fact that 34% of dentists now buy from mail order companies . . . and the primary reason for this phenomenon is discount prices. A startling revelation?

Not really. Survey statistics like this can be equated to women's bathingsuits . . . what they reveal can be very interesting; but, what they conceal is vital! Less dramatized figures in the same report told another story. Almost one third of the dentists using mail order complained about "slow delivery" and "too many back orders". Goods damaged in transit; unauthorized brand substitutions; and the difficulty of returning goods were other notable complaints . . . as were the "no credit" policies of the discounters and a general lack of product information. Maybe they didn't read the fine print.

All things considered, Doctor. Are the mail order savings real . . . or illusionary?

A vital consideration.

DENCO



Caries under an occlusal sealant

The Report of A Case "Caries Under An Occlusal Sealant" in your issue of April 1977 was of surpassing interest.

While reprints of radiographs are not the best diagnostic means, it would appear the patient presented requiring MOD amalgams in right and left lower second deciduous molars, and occlusal amalgams in the six year molars with prophylactic treatment of the mesial surfaces of these molars. A clinical judgement to ignore the caries of the lower first deciduous molars is possible, although risky.

At the end of nine or thirteen months of treatment, the patient still requires restoration of much larger cavities in the deciduous teeth, and in addition MO restorations in both six year molars.

Plastic restoration of occlusal surfaces of lower molars is a doubtful technique.

Is this prevention? Is it fair to a patient who presents in good faith for treatment?

Norman C. Ferguson, DDS
New Westminster, B.C.

Re: "Caries Under an Occlusal Sealant," Case Report. 43:4.

Some of your readers may have noted, in the radiographs, untreated caries in the primary dentition. As author I wish to acknowledge the presence of the caries. Unfortunately circumstances did not permit comprehensive treatment prior to the taking of the radiographs. Professional responsibility will of course follow the restorations that were placed.

A. S. Richardson, DDS, MSc,
Associate Professor,
University of British Columbia

Dentist mortality rates

I have been following the discussion regarding dentist mortality and suicide rates as a matter of interest. There seems to be a great variation in the Journal reports of the last few years.

I do not believe that the statements given on page 111 in the March Dental Journal can be considered statistically valid at this time. The news media stories referred to are concerned with events that are happening today. It is invalid to try and use statistics from 12 to 17 years ago and say that they apply to the situation today. 1977 is a totally different generation and life style than that of the 1960's.

If you are really concerned about this issue, you should use a study of statistics for the period of time 1971-76. However, I do not think that this will make much difference to the situation in dental practice today.

R. J. Archibald, DDS
Bridgewater, N.S.

Toothkeeper evaluation

In reply to the letter of Dr. Lewis in the February issue, I would like to make the following comments. There is literature available that validates Toothkeeper; I will be forwarding it to Dr. Lewis. However, no matter how much data or proof I could submit, there will still be people who will doubt any dental health education program.

My interest is more in the great availability of sugar foods in many Canadian and U.S. schools. Whether Toothkeeper or any other dental health education is used in any school, I feel the dental profession should do more in its efforts to reduce or eliminate the availability of sugar foods in school vending areas. Literature tells us that sucrose is the main causative substrate

in caries, so why are we allowing many North American schools to have such foods available for the children? Are we really interested in the dental health of these children?

I commend those who are trying to do something about the sugar problem. To those who are not, I say re-evaluate your thinking and start doing something in your practice or community. If we don't do it, it really won't get done.

I'd like to thank all of those people who sent me information on their regional dental health education programs. You have all been very helpful.

Donald J. Bachinsky, DMD
Winnipeg, Manitoba

Announcements...

Continued from page 305

Circulo Odontologico Del Sur (Southern Argentina Dental Society), Second International Congress and Third Socio-Economic Congress, Bahia Blanca, Argentina, May 25-28, 1978. International lecturers will deal with all clinical specialties. Contact: Dr. R.L. Ellis, Associate Professor, Department of Community Dentistry, University of Toronto, Faculty of Dentistry, 124 Edward St., Toronto, Canada M5G 1G6.

New Zealand Dental Association, 9th Biennial Conference, Christchurch, August 20-25, 1978. Contact: R.C. Service, Honorary Secretary, NZDA Biennial Conference Committee, P.O. Box 1301, Christchurch, New Zealand.

International Association on Dentistry for the Handicapped, 4th International Congress, London, England, September 12-15, 1978. Contact: Conference Office, 4th ICDH, Dental School and Hospital, University of Birmingham, St. Chad's Queensway, Birmingham B4 6NN, England.

new **Aim**® toothpaste

The fluoride toothpaste with the taste children prefer



Child-tested and proven for its superior taste

1300 children tested the taste of new Aim Toothpaste against the taste of the two leading fluoride brands. Result: Children preferred Aim 2 to 1 over those brands. They find its minty flavour truly delicious and they love its clear blue-green color and smooth texture.

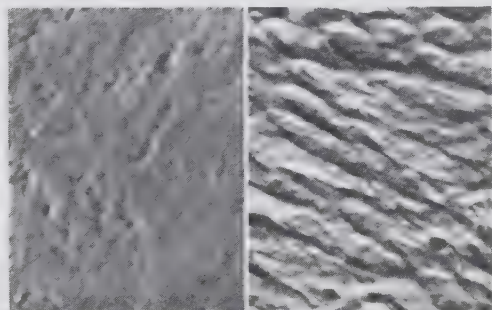
Significance: With taste so superior, your young patients will hardly need coaxing about brushing. And by brushing regularly, they'll get the anti-cavity ingredient they need — regularly.

Proven for its fluoride ion availability

New Aim contains the established concentration of 0.4% stannous fluoride — an anti-cavity ingredient time-proven for its effectiveness as an aid in reducing the incidence of cavities. Aim also has a silica gel base, assuring that the fluoride ion availability is maintained during normal shelf life. In fact, laboratory tests show that the fluoride ion concentration in Aim is readily available for incorporation into tooth structure.

Proven for its gentleness to dentin and enamel

Aim's silica aerogel/xerogel abrasive system* aids in the removal of plaque, pellicle, food particles and stains — with notable gentleness to enamel and dentin. Significance: Aim cleans patients' teeth safely — the way you want them to be.



Surface of normal tooth enamel (2000×) — treated with Aim (exposed section of polished enamel surface, immersed for 15 minutes in a 25% aqueous slurry of Aim followed by a thorough rinsing) — then etched with 0.1N lactic acid, pH 4.5 for 10 minutes. Enamel surface shows minimal etching.

Surface of normal tooth enamel (2000×) — sectioned and polished but left untreated — etched with 0.1N lactic acid, pH 4.5 for 10 minutes. Enamel surface shows extensive etching.

RECOMMEND AIM WITH CONFIDENCE...



a product of:
LEVER DETERGENTS LIMITED
Toronto, Ontario M4M 1B6

*Canadian Patents #835353. #914069

REFUTATION D'UN LIEN FLUORURE-CANCER

Le Dr R. M. Taylor, Directeur exécutif de l'Institut national du cancer du Canada réfute totalement la déclaration faite récemment par un biochimiste américain à la retraite, établissant un lien entre l'eau fluorée et le cancer.

Au cours de la fin de semaine de Pâques, le Dr Dean Burk, ancien chef de la Division de chimie Cyto de l'Institut national du cancer à Washington, a déclaré lors d'un congrès de l'Organisme canadien de la santé du consommateur que l'addition de fluorure à l'eau potable a pour conséquence dix pour cent de tous les décès annuels dus au cancer aux États-Unis.

Le Dr Taylor déclare: Le Dr Burk n'est qualifié ni dans le domaine de l'épidémiologie ni dans celui du cancer humain. Plusieurs directeurs consécutifs de l'Institut national du cancer ont réfuté sa compétence dans ces deux domaines.

"Si le Dr Burk estime qu'il a des nouvelles preuves à cet égard, la manière la plus efficace d'y attirer l'attention est de les publier. Ou bien il ne les a pas publiées, ou encore, elles ont été rejetées.

"Sans l'ombre d'un doute, le fluorure *ne* cause *pas* le cancer! Je réfute totalement la théorie du Dr Burk à cet

égard. Il est une personne connue; il a fait, dans d'autres domaines, des déclarations non qualifiées concernant des soi-dits remèdes contre le cancer. Il est très controversable et je n'accepte nullement sa compétence.

"Je ne le considère nullement qualifié pour faire les déclarations qu'il a faites. Le fluorure ne constitue aucun danger à titre d'additif aux eaux domestiques.

Outre le Dr Taylor, de nombreux représentants des domaines de la médecine et de la médecine dentaire de tout le Canada ont enregistré une forte opposition à la déclaration du Dr Burk.

LES DIVERSES COMMISSIONS DE LA FDI CONTEMPLANT LEUR AVENIR

La Fédération dentaire internationale sous la direction du Dr Jan Erik Ahlbert, nouveau Directeur exécutif, commence à passer en revue ses activités actuelles.

Cet examen ne signifie pas que tout changera, mais compte tenu des changements qui se produisent au sein de la profession, aussi bien au niveau de la nature des traitements que de leur distribution, la FDI doit également s'adapter aux nouvelles conditions et exigences.

Les sept commissions qui existent actuellement constituent une partie très importante de la structure de la FDI. Depuis plusieurs années il est question de les réorganiser. En vue de promouvoir cette réorganisation, le Conseil de la FDI a, pour la première fois, donné aux présidents des commissions, qui viennent de pays aussi lointains que l'Australie, le Canada, le Japon, la

Nouvelle-Zélande et les États-Unis, l'occasion de se réunir à Copenhague les 26 et 27 mars en vue de pouvoir discuter de leurs programmes et de la manière dont ceux-ci fonctionnent.

Cette assemblée a été tenue, pour les membres invités, au siège social de l'Association dentaire danoise, qui a mis à la disposition des présidents des commissions, les aménagements utilisés par son Conseil. Les présidents ont été accueillis par les délégués danois à la FDI, les Drs Bent Michaelsen et Arne Neergaard Jacobsen; l'assemblée était présidée par le Dr Ahlberg.

La base des discussions reposait, de toute évidence, sur la Déclaration de principe sur la santé dentaire adoptée par la FDI l'an dernier à Athènes. Ce document qui traite d'un grand nombre d'aspects importants de la profession, présentera divers stimulants aux activi-

tés futures des commissions. Les présidents de celles-ci étaient chargés d'essayer d'accorder la priorité aux projets les plus utiles aux organismes nationaux et à leurs membres ainsi qu'à l'avancement de la profession. Les présidents étaient également désireux de trouver les méthodes les plus efficaces dans le but de réaliser ces projets, que ce soit dans le cadre de la structure traditionnelle ou, à longue échéance, dans celui d'une structure modifiée.

Les présidents ont également discuté d'une nouvelle structure pour les commissions, destinée à créer des méthodes plus efficaces pour réaliser ces projets et améliorer considérablement la liaison entre les commissions, le Conseil et l'Assemblée générale. La nouvelle structure suggérée permettra également la réduction du nombre de jours consacrés aux Congrès dentaires mondiaux annuels.

De belles couleurs naturelles de dents
pour la plupart des restaurations.

Le choix de teintes Trubyte® Bioform®.



Avez-vous réalisé que vous pourriez utiliser votre Guide de Teintes Bioform pour à peu près toutes les restaurations prothodontiques fixes et amovibles?

N'est-ce pas pratique? . . . et si précis en même temps.

N'oubliez pas de prescrire les produits de qualité Dentsply qui ont été fabriqués spécialement pour aller avec votre guide de teintes . . .

Les dents **TRUBYTE BIOFORM** en porcelaine et en plastique
pour des prothèses complètes et partielles.

La porcelaine **BIOBOND**® pour les couronnes et ponts.

La porcelaine à l'alumine **TRUBYTE BIOFORM** pour les couronnes.

CAULK® **BIOLON**® pour facettes de plastique.

Si vous ne possédez pas encore l'un des quelque 70,000 mille guides de teintes Trubyte Bioform actuellement utilisés, vous pouvez en obtenir un chez votre distributeur Dentsply.

TRUBYTE®

Dentsply Canada, Ltd. Toronto 2-B, Ontario
Tous droits réservés.

LE RÔLE DU GOUVERNEMENT DANS LA PROFESSION DENTAIRE

Il est de plus en plus question d'ouvrir des portes dans la pratique de la profession dentaire. Les soins médicaux étant devenus des biens de consommation dans une société où la misère, la pauvreté et la maladie constituent un élément électoral très sérieux, il est compréhensible que les gouvernants tentent d'affirmer leur présence en s'ingérant dans les "affaires sociales". Il n'est plus question de laisser les professions seules dans les modes de distribution des soins médicaux, et M. Thomas J. Boudreau, du ministère fédéral, affirme, d'après la citation empruntée au *Journal Dentaire du Québec* (oct. '76, p.15), qu'il n'est pas question non plus de retour aux anciennes politiques dans cette distribution.

Après avoir ainsi imposé (ou se proposant de le faire) au public l'obtention des soins par un grand éventail de distributeurs, le ministère des Affaires Sociales, "effectuera une nouvelle répartition des effectifs médicaux en fonction des besoins des régions et selon les carences décelées dans certains domaines de pratique" (*Le Soleil*, 4-12-76) et "un certain nombre de mesures, dont certaines seront en vigueur d'ici un an et demi, devront permettre une nouvelle rationalisation des ressources médicales, par région géographique et par spécialité de pratique" (*Le Soleil*, 4-12-76).

Il s'agit d'un enrégimentement que le ministère instaure par des mesures "incitatives" — octroi ou faveur aux conscrits — ou "punitives" — refus de paiement si le professionnel ne pratique pas là où il a été "invité". Dans le cas de l'administration d'un hôpital "le ministère, si ça va mal, doit intervenir de façon autoritaire et, si nécessaire, de façon dictatoriale". (*Le Soleil*, 4-12-76).

De tels projets, et on pourrait en citer d'autres, suffisent à démontrer jusqu'à quel point on veut mettre le grappin sur tous les aspects de la distribution des soins médicaux, y compris leur qualité, comme l'a mentionné le président de

l'Office des professions, M. Boudreau. (*Journal Dentaire du Québec*, Oct. '76).

On parle aussi beaucoup plus de responsabilité professionnelle, depuis que le mouvement californien vers la poursuite judiciaire. Les primes d'assurances s'élèveraient à plus de \$50,000.00 par année chez les chirurgiens de la Californie où l'on accorde une importance primordiale aux jugements favorables. Or, les mesures préventives aux poursuites supposent des précautions conditionnelles à la rentabilité du cabinet dentaire privé. Face à une poursuite, le dentiste peut plus facilement avoir gain de cause si un dossier écrit très complet a été dressé.

Par dossier très complet, on entend radiographies, modèles d'études, histoire médicale, antécédents, etc. . . . A un généraliste qui est appelé à faire une simple extraction, on pourrait reprocher l'absence au dossier d'une formule sanguine du patient, si une complication post-opératoire survenait. L'absence d'un écrit de consentement au traitement pourrait également occasionner des difficultés si le dentiste n'a pas eu la précaution de l'inclure au dossier. Et, on en passe.

Comment donc concilier la prévention aux poursuites avec le gagne-pain des dentistes qui ont affaire avec une population déjà majoritairement incapable financièrement de se permettre des soins dentaires complets? Imposer aux patients tout ce que doit pourtant comprendre un dossier complet est une addition à un fardeau déjà trop lourd. Or, ce n'est pas seulement l'aspect judiciaire et punitif qu'il faut considérer. Il faut situer ces contingences dans le contexte global du "mieux-être du patient."

A cet égard, le dentiste qui ne veut pas risquer sa carrière et ses économies peut tendre à ne faire que des actes sans conséquence importante. Il tendra donc à jouer un rôle que les gouvernements accordent aux paras avec toute la béné-

diction que suppose cette économie financière.

Encore là, le dentiste aurait néanmoins des possibilités d'assistance dans les cas d'identification judiciaire. Ces diverses considérations et tout ce qu'elles comportent par voie de conséquences, suffisent bien pour que les professions dentaire et médicale prennent conscience du fait qu'elles perdent leur caractère de sacralisation. Les gouvernements réalisent fort bien, comme nous le réalisons silencieusement, que les arguments, la socialisation dans laquelle nous sommes engagés, les tendances sociales, jouent en faveur d'un décloisonnement.

Que des changements soient inévitables et nécessaires, personne ne le conteste. Cependant, la voie dans laquelle s'engage les gouvernements pour réaliser ces changements est discutable.

Ainsi par exemple, lorsqu'on a donné aux denturologistes le droit de transiger directement avec le public à condition que le patient détienne une attestation de santé buccale émise par un dentiste, on a cru que l'on épargnait des sous à la population en leur fournissant un moyen apparemment plus économique d'obtenir des prothèses, ce dont le gouvernement espérait retirer des économies lorsqu'il devait défrayer les coûts pour les assistés sociaux.

Les malins auraient pu interpréter cette législation comme affirmant que les dentistes chargent trop cher et qu'avec des denturologistes on va faire économiser la population et le gouvernement, tout comme si ces messieurs recevaient, en même temps que le certificat de compétence, un hommage à leur désintéressement aux biens de la terre. On espérait beaucoup, mais sans tenir compte du fait que le denturologiste, pas plus détaché des biens de la terre pour autant, avait l'appétit assez vif pour entrer dans la valse des coûts ascensionnels, de sorte que l'on rencontre des techniciens qui exigent des tarifs effarants, voire même supérieurs à ceux

McGILL NOMME EN NOUVEAU DOYEN

Le Dr Kenneth Bentley a été nommé doyen de la Faculté dentaire de l'Université McGill; cette nomination entrera en vigueur le 1er juin 1977. Le Dr Bentley succède au Dr Ernest Ambrose qui a dernièrement démissionné pour entrer en fonctions à titre de Doyen de la Faculté dentaire de l'Université de Saskatchewan.

Le Dr Bentley, double-diplômé de McGill, a obtenu son DDS en 1958 et son MCDM en 1962. Il s'est joint aux rangs du personnel de la Faculté dentaire de McGill en 1966 à titre de professeur-adjoint au Département de chirurgie buccale pour en devenir le chef un an plus tard. Professeur agrégé en chirurgie buccale depuis 1967, il a été nommé en 1968 au poste de direc-

teur de la Division de médecine et de chirurgie buccales, puis directeur du programme post-universitaire en 1970. Outre son poste de chirurgien dentiste en chef à l'Hôpital Montreal General, il occupe divers postes dans un nombre d'hôpitaux de la région.

Le nouveau doyen a siégé à divers comités de la Faculté et il fait partie de nombreux organismes professionnels aux niveaux provincial, national et international. Il est actuellement président-sortant de l'Association des facultés dentaires canadiennes. Auteur d'un grand nombre de communications et articles médicaux-scientifiques, il a participé, au Canada ainsi qu'aux États-Unis, à de nombreux séminaires et congrès dentaires.

Le rôle du gouvernement...

d'un prosthodontiste certifié. Quant à la condition du certificat de santé émis par un dentiste, on s'en balance éperduement et, à notre connaissance, aucun denturologiste n'a été importuné. Il jouit d'une plus grande impunité que le dentiste qui, lui, est sujet à la surveillance nécessaire impliquant les représailles possibles de l'Ordre des dentistes.

On a aussi oublié de prévoir une rareté des techniciens au service des dentistes. Abandonnant la clientèle des dentistes pour celle du public, la situation ébranle la structure même du cabinet dentaire qui se voit forcé de refuser certains services de prothèse que ne peuvent pourtant fournir un denturologiste, de sorte que plus de patients handicapés par un cas plus difficile n'ont d'autre choix que de se handicaper davantage avec des appareils inappropriés. La législation tend de plus, à insinuer qu'un technicien vaut le généraliste.

Un gouvernement ne peut pas en effet autoriser un service de santé qu'elle croit inférieur. La profession dentaire n'a jamais cru qu'un technicien compétent peut servir le public, aussi bien qu'un généraliste compétent. Pourtant, la législation elle est là.

On se prépare à instaurer des modes de distributions des soins par des auxiliaires. Au fond, ces projets de législation comportent des jugements sévères contre la profession même si elles sont passées sous le prétexte très valable qu'il faut rendre les soins dentaires plus accessibles à plus de gens. Pourtant, les projets sont là.

Il nous semble que tous ces bouleversements s'amorcent tout comme si l'on croyait que la profession est rendue totalement inefficace et que la pratique des dernières années avait conduit au fiasco. Tel n'est pas le cas et si l'on portait autant de positivisme à tous les éléments favorables qu'on accorde d'acharnement aux problèmes pourtant réels, on ne risquerait pas les dangers qui peuvent survenir du fait qu'à travers les projets de réforme, on oublie des structures essentielles dont la plus importante est de situer le généraliste dans cet ensemble qu'on veut rénover.

Un regard vers l'avenir peut faire réaliser que le généraliste actuel, s'il perd trop de prérogatives, devra être orienté différemment, dès le départ. Entrevoit-on les conséquences?

Dr. Robert Lambert

Toronto nomme en nouveau doyen

Le Dr Richard Ten Cate, professeur et chef de la Division des sciences biologiques à la Faculté dentaire a été nommé doyen de cette faculté. Il succède au Dr Gordon Nikiforuk qui terminera le 30 juin 1977 un mandat de sept ans.

Le Dr Ten Cate a obtenu à l'Université de Londres un doctorat en anatomie en 1958 et un BDS en 1960. En 1968, le Dr Ten Cate s'est joint aux rangs du personnel de la Faculté dentaire à titre de professeur titulaire et en 1971, il est devenue chef de la Division des sciences biologiques de cette faculté.

Le Dr Ten Cate a rempli ses fonctions administratives au sein de la faculté et de l'université, à titre de membre du Comité des programmes et des normes (Committee on Curriculum and Standards) et à titre de président du Comité des sciences de la santé du Conseil des recherches. En dehors de l'Université, il siège au Comité des bourses du Conseil des recherches médicales du Canada.

Le Dr Ten Cate a prononcé dans le monde entier des conférences traitant d'histologie dentaire et il a collaboré à plusieurs manuels dans ce domaine. Ses recherches ont considérablement avancé la compréhension des changements biochimiques et anatomiques qui ont lieu lors du développement de tissu dentaire.

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 31 mai, 1977:

<i>Fonds d'actions ordinaires</i>	\$27.220
<i>Fonds à revenu fixe</i>	\$19.504
<i>Fonds avec garantie</i>	\$13.653

L'avoir total (valeur marchande) du régime se montait à \$25,608,833.21.

Pour de plus amples renseignements, veuillez écrire à CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ontario M5R 2P2.

UNIVERSITY OF ALBERTA FACULTY APPOINTMENTS

As a result of the vacancy caused by the death of Dean James McCutcheon, the University of Alberta's Faculty of Dentistry has announced several new staff appointments. Dr. D. M. Collinson has been appointed Acting Dean, Dr. R. V. Blackmore has taken over the position of Associate Dean and Dr. G. H. Gibb has become Assistant Dean. Dr. Gibb has resigned the post of Chairman of the Division of Operative Dentistry and Dr. W. C. Meyer has been appointed as his replacement.

Dr. Collinson graduated from the University of Alberta's Faculty of Dentistry in 1958. The following year he became a sessional lecturer and in 1961 became a permanent part-time lecturer and Chairman of the Division of Endodontics. Following a leave of absence in 1966-67 he was appointed to the full-time staff in the capacity of Associate Professor and Clinical Director. He received his post-graduate qualifications in endodontics and was reappointed Chairman of that Division. In 1969 he was appointed Assistant

Dean and in 1970 was promoted to a full professorship. Dr. Collinson has wide training and experience in the academic world to guide him in his new post as Acting Dean.

Dr. Blackmore graduated from the University of Alberta's Faculty of Dentistry in 1943 and immediately joined the Royal Canadian Dental Corps. Upon his discharge he practised two years in Claresholm before taking up a practise in Edmonton, at which time he became a part-time sessional demonstrator in the Faculty's operative department. He progressed through the academic ranks of lecturer and assistant professor prior to undertaking graduate training in 1957 at the University of Rochester where he received his Graduate Fellowship in Microbiology in 1962 and a PhD a year later. When he returned to the University he was appointed Professor in the Dental Research and Oral Biology Department and became Acting Chairman of the Department in 1969. He also served as Chairman of the Department of Re-

search and Graduate Study. Dr. Blackmore has served in many major administrative positions at the University of Alberta as well as on various Councils of the Canadian Dental Association.

Dr. Gibb, a 1952 dental graduate of the University of Alberta, spent five years in the Royal Canadian Dental Corps, half of that time in Europe. Following several years of practise in Alberta, he was named full-time clinical instructor at the University of Washington. During this time he received private instruction in operative dentistry. He practised part time in Seattle from 1956 to 1959 and became deeply involved in gold foil restorations and was inducted into the American Academy of Gold Foil Operators. In 1959 he accepted the position of Assistant Professor in the Department of Restorative Dentistry at the University of Alberta and was later promoted to an associate professorship and Head of the Department. In 1968 he was promoted to the rank of Professor.

INCLUDE FLUORIDATION IN U.S. PREVENTION DRIVE, SAYS ADA

American Dental Association President Frank F. Shuler has pledged the Association's "wholehearted cooperation" in the Carter Administration's new national immunization campaign for children, while at the same time urging the Administration to include a program of water fluoridation grants as part of this national preventive effort.

The purpose of the Administration's campaign is to increase public awareness and concern about the low levels of immunization against childhood diseases and to provide increased grant monies for immunization programs.

In a letter to Health, Education and Welfare Secretary Joseph A. Califano, Jr., pledging the Association's support

for the campaign, Dr. Shuler said: "The nation's dental profession urges you not to overlook the fact that fluoridation of community water supplies is a significant preventive tool in the fight against dental caries in children.

"Fluoridation, which costs only pennies per person per year, is especially beneficial for the children of the poor who often do not seek adequate dental care. In addition, the benefits of fluoridation last throughout a lifetime since the decay resistance is built into the teeth."

Pointing out that only half the U.S. population today benefits from fluori-

dated water systems, Dr. Shuler recalled that in recent years legislation to provide federal grants for community fluoridation systems twice passed the Senate, but failed to become law.

"If the Department of Health, Education and Welfare had presented a strong endorsement of the legislation, we believe this vitally needed fluoridation assistance would be law today," he said.

"The dental profession asks that the Administration take a careful look at the beneficial aspects of fluoridation on children's dental health and include such a proposal in the new national disease prevention program."



You've finished his fluoride treatment. Now let Colgate's fluoride take over.

Colgate's MFP* fluoride gives your patients extra protection
to fight decay between check-ups.

It's a fact. Our clinical tests have shown that the regular use of Colgate with MFP fluoride **alone** will significantly reduce the incidence of new caries. Used in conjunction with your topical application therefore, it follows there should be an even greater reduction.

Colgate with MFP provides specific and significant advantages.

1. Regular use of Colgate makes

teeth more **resistant to decay.**

We believe that Colgate's MFP (sodium monofluorophosphate) is effective in converting tooth enamel apatite into fluorapatite (a calcium fluorophosphate) because of the chemical similarities of the two.

2. While the staining of teeth has been a problem associated with some dentifrices, it is reassuring to know that this is not a problem with

Colgate MFP.

3. Colgate MFP is known for its **fluoride stability.** Sodium monofluorophosphate is still present and effective even after three years.

So after you've completed your fluoride treatment, tell your patients about the protection that Colgate Dental Cream with MFP can provide. And give them a new fighting chance against decay.

"Colgate has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."

*TM Reg'd.

Canadian Dental Association.

Colgate-Palmolive Canada.

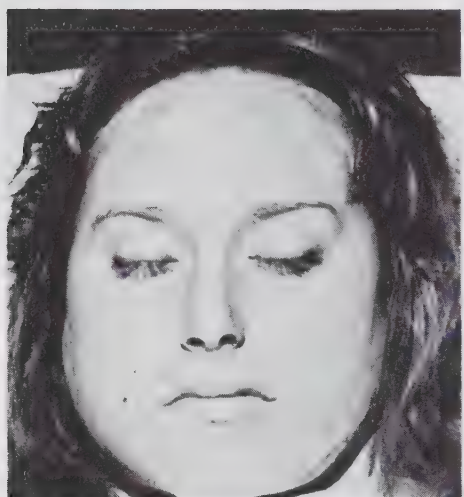


UNIDENTIFIED HOMICIDE VICTIMS



On August 9, 1976, the bodies of a young man and woman were found in Sumter County, South Carolina. Both were victims of murder and the bodies have never been identified.

Photographs and dental charts have been published in all dental journals in the United States without success. Information has now been received that these people were seen in Canada some years ago and that they may possibly be Canadians. The London Detachment of the Royal Canadian Mounted Police has entered into the investigation with the Sumter County Sheriff's Department.



The man is described as Caucasian, 18-22 years old, 6'4", 155 lbs., brown hair and brown eyes. He had very elaborate dental work with crowns and bridges. The crown on his left front tooth was acrylic or porcelain. Most of his upper teeth had fillings and he had some teeth missing top and bottom, noticeably in top left back.

The woman is described as Caucasian, 18-20 years old, 5'5", 105 lbs., brown hair and blue-green eyes. She had two small hair moles on her left cheek and one on the right side of her

face and had pierced ears. She had no elaborate dental work and her teeth were even in appearance. The upper and lower wisdom teeth on the right were missing and those on the left were intact. All her back teeth had fillings.

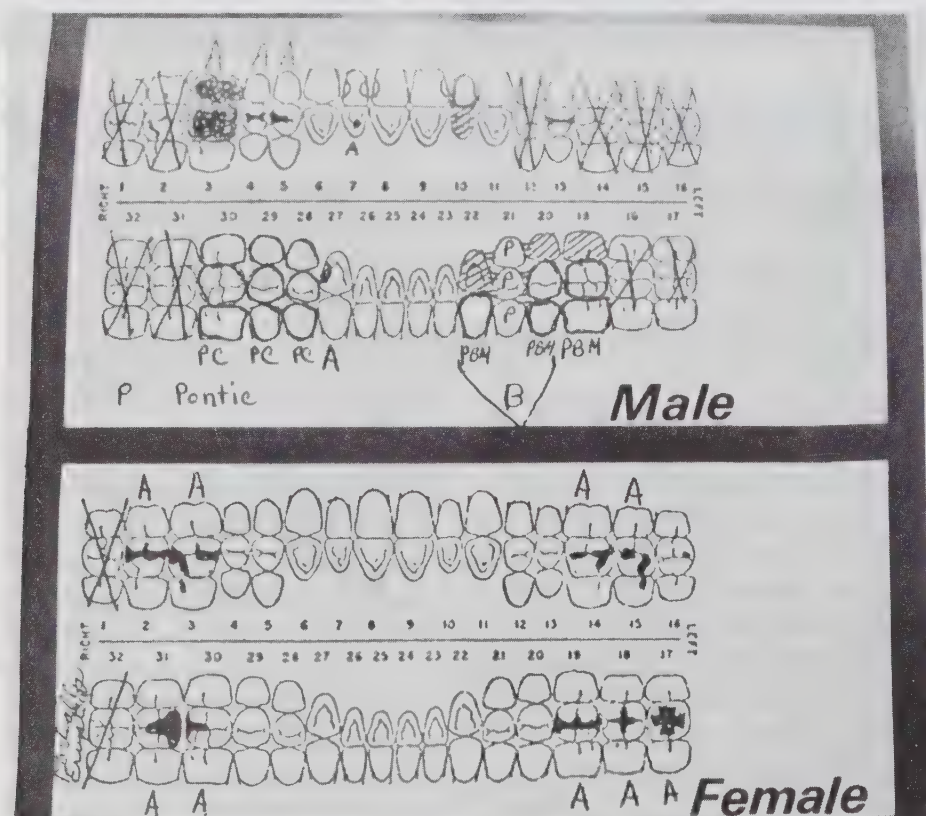
Any Canadian dentist who can assist in the identification of these people is asked to contact: Cst. John Haasen, General Investigation Section, Royal Canadian Mounted Police, London Detachment, P.O. Box 427, Station B, London, Ontario N6A 4W1.

DEATHS

Carmichael, Norman Cavin, 86. Winnipeg, Manitoba. Royal College of Dental Surgeons, 1910. 30-3-77. Survived by Cavin (son) and Mrs. J. A. Love (daughter).

Charland, Walter E., 76. Verdun, Quebec. McGill University. 29-3-77. Survived by Antoinette (wife), Suzanne (daughter) and Bruce (son).

Ishiwara, George Akira, 66. Vancouver, British Columbia. North Pacific College of Oregon, 1934. 12-3-77. Survived by Kay (wife), Keith (son), Vyvyan and Gayle (daughters).



CDA Retirement Savings Plan

Unit values of the Canadian Dental Association Retirement Savings Plan stood as follows on May 31, 1977:

<i>Common Stock Fund</i>	\$27.220
<i>Fixed Income Fund</i>	\$19.504
<i>Guaranteed Fund</i>	\$13.653

Total assets (market value) of the plan were \$25,608,833.21.

For further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ontario M5R 2P2.

CFDE TRUSTEES APPROVE GRANTS OF OVER \$160,000

At their recent annual meeting the Canadian Fund for Dental Education's 10-member Board of Trustees approved a record shattering total of \$161,000 in 1977 grants aimed at advancing dental education and research.

In order to make these awards possible and still achieve a balanced budget, the trustees confidently approved a forecast calling for a 25 per cent increase in total income this year.

Fellowship Awards: Conclusions and Recommendations of CFDE's Advisory Committee

Prior to the trustees' meeting, the Fund's four member Advisory Committee on Fellowship Selection met and reviewed fellowship applications from dentists wishing to take graduate training in order to pursue teaching careers in Canadian dental schools.

Despite the financial constraints on dental faculties, practically all of the applicants for these fellowships had a commitment for at least half-time employment upon completion of their studies. The Committee, therefore, recommended that fifteen dentists and one non-dentist (a dental faculty teacher) be awarded fellowships of varying amounts, depending largely on the applicants' plans to teach full- or half-time. The Committee also strongly recommended that the trustees continue to give high priority to the Fund's fellowship program.

Additionally the Committee considered eight applications for the \$1,500 annual award offered by the Fund and sponsored by Warner-Lambert Canada Limited. Purpose of this award is to provide an opportunity for an established teacher of dentistry to refresh and extend his or her knowledge in any field of dental education or research.

The Committee noted that the number and quality of applications for this award had increased remarkably in the last three years and suggested that, funds permitting, at least two such fellowships be offered annually.

Also reviewed were fellowship applications from nine dental hygienists. In some instances applicants are already teaching and desirous of upgrading their skills, while others wish to take additional training in order to qualify for teaching positions in dental hygiene schools.

After careful consideration the Advisory Committee recommended that fellowships, each with a value of \$1,000, be awarded to six hygienists.

All of the Advisory Committee's recommendations were subsequently approved by the trustees. Total cost of the Fund's 1977 fellowship program will be \$66,000.

Other Major Awards

CDA Graduate and Undergraduate Accreditation Program	\$21,000
Dental Students' Conference and Table Clinic Program	\$ 7,600
University of Toronto Research — Congenital Malformations and Mandibular Fractures (Funded by a Toronto Hospital for Sick Children Foundation Grant)	\$41,000
ODA Dental Health Conference	\$ 1,500
Third International Congress on Cleft Palate and Related Craniofacial Anomalies	\$ 2,000
FDI/CDA Congress — Lecture Program	\$ 1,300
CDA/ACFD Teaching Conference — Physical Diagnosis in Dental Education	\$ 4,600
MacLachlan Endowment — Universities of Toronto, McGill and Dalhousie	\$ 4,000
Grants to all Dental Schools	\$10,000
CDA Council for Dental Materials and Devices	\$ 2,000

Nominations

CFDE trustees are originally appointed for a three-year term and are eligible for reappointment for a second three-year term.

Dr. James A. Guest of London,

Ontario, Dr. W. Kenneth Martin of Regina, Saskatchewan, and Dr. Basil M. Plumb of Vancouver, British Columbia, completed their first term of office and all three were nominated for reappointment.

Operational Income

In 1976 personal contributions from the dental profession rose sharply — over 30 per cent. The trustees regarded this as most encouraging and are optimistic that the trend will continue in 1977.

Professional leadership is essential to the Fund's progress. Therefore, the trustees confidently expect that the total income this year will be at least \$237,000.

Ontario orthodontists select new executive

During the recent meeting of the Ontario Dental Association in Toronto, the Ontario Society of Orthodontists elected its 1977 slate of officers: Dr. Randy Lang, president and Royal College of Dental Surgeons representative; Dr. Ron Cross, past president; Dr. Don Gilbert, vice president; Dr. John Jenkins, secretary-treasurer; Dr. Ron Pileski, CDA representative; and, Drs. Richard Pass and Don Gilbert, insurance representatives.

Canadian orthodontists announce annual meeting

The Canadian Association of Orthodontists will hold its annual meeting October 20-23, 1977, at the Hyatt Regency Hotel in Toronto, just prior to the World Dental Congress.

An interesting scientific and social program has been planned. The main speakers for the scientific sessions include: Dr. A. Gianelly, Professor and Chairman of the Department of Orthodontics at the Boston University Medical Centre, who will speak on "Craniofacial growth and development in clinical practice"; and, Dr. R. C. Chiapone of Moraga, California, who will deal with the topic "Principles of occlusion applied".

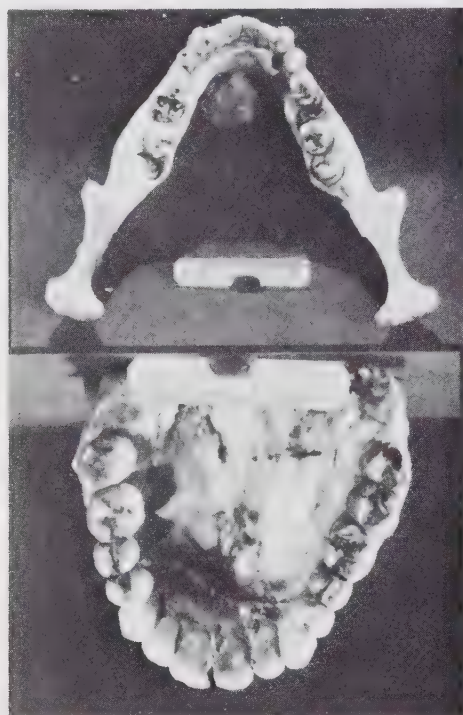
RCMP SEEKS ASSISTANCE IN IDENTIFYING HOMICIDE VICTIM

The Edmonton General Investigation Section of the Royal Canadian Mounted Police is endeavoring to identify a badly decomposed male body found April 13, 1977, on an abandoned farm near Tofield, Alberta, 35 miles east of Edmonton. The victim was brutally murdered.

He is described as Caucasian (could include mixed races), 23-32 years old, 5'10", approximately 180 lbs., black hair. The dental information is as follows: Occlusion — class I molar relationships with 25 per cent anterior overbite; Restorations — composites in anteriors on proximal and labial surfaces (extensive labial on 12 joined

with mesial); amalgam in posteriors; Shape of centrals — ovoid tapering; Other abnormalities — sinus tract on labial surface over apex of 11; crown of 46 lost with roots remaining at height of gingival margin; large carious lesions DO of 18 and DO of 34; mesio-labial rotation of 33 and 43.

Due to the difficulty in identification of the body, the assistance of dentists across Canada is requested. Any dentist with information is asked to contact: Cpl. D. J. Smith, General Investigation Section, Homicide Section, Royal Canadian Mounted Police, P.O. Box 1320, Edmonton, Alberta T5J 2N1; or phone: (403) 425-7743.



PATIENT'S NAME: UNIDENTIFIED MALE		13 APRIL 1977	P.M.-15	15.4.77
-----------------------------------	--	---------------	---------	---------

FDI/CDA Toronto Congress HOSPITALITY — CANADIAN STYLE

Two areas at the FDI Congress will be set aside for the Ladies where they can relax, enjoy a free cup of coffee, meet with friends and make new acquaintances.

At the Congress Hotel, the lovely Royal York, there will be a suite which will feature Canadian fruits, wines, cheese and home baking, all at no charge.

In the Automotive Building of the CNE, will be a display of arts, crafts and hobbies which dentists and their wives pursue in their leisure hours. The second lounge will be in this area where you will also be made very welcome with a cup of coffee and the opportunity to rest a while.

Please make a point of visiting both hospitality lounges as often as you wish and let us demonstrate to you how happy we are that you are attending the FDI Congress. Favors for the ladies and special draws for prizes will also be attractions.

The hostesses, under the direction of Mrs. Wanda Kamienski, are multi-lingual wives of dentists. They are prepared to help you in many ways to make your visit to this congress a memorable one.

Hospitality Committee.

REGISTER NOW!

Don't wait. Since Congress attendance figures are expected to reach record levels, early pre-registration is strongly recommended. For your convenience a registration and hotel reservation form is included at the back of this issue. Fill it out and return it, with your cheque, today. This is one meeting you can't afford to miss.

Caulk Polyjel[®]

Nothing offers
greater accuracy,
greater stability.



For more
information
check number 101



Polyjel...

a new type of material
for crown and bridge impressions
—a polyether.

- Mixes and handles easily. No mess.
No excessive flow.
- Olive green color for attractive, easy-to-read impressions
- Pleasant taste and odor.
- Firm consistency that displaces gingival tissue — to assure reliable impressions of difficult areas.
- Sets promptly (remove in five minutes) — saves chair time.
- Can be used in either stock or custom trays.
- Excellent dimensional stability.
- One consistency meets all needs.

Polyjel—for fast-setting, pleasant-to-make impressions that don't compromise on accuracy or stability. It may be just what you've been looking for.

Caulk® making life
a little easier
for dentists

Division of Dentsply International Inc.

CDNAA ANNOUNCES CONVENTION PROGRAM FOR 1977

The Canadian Dental Nurses and Assistants Association will hold its National Convention October 23-27, 1977, at the Holiday Inn in downtown Toronto. The Ontario Dental Nurses and Assistants Association will host the event to be held in conjunction with the 65th Annual World Dental Congress of the Fédération Dentaire Internationale.

Pre-convention executive activities will get underway on Friday, October 21, with a meeting of the Council on Certification. On Saturday and Sunday, beginning at 9:30 a.m. the executive of the CDNAA will meet.

At 8:00 p.m. on Sunday, delegates will attend the official opening ceremonies of the World Congress at the Royal York Hotel and the wine and cheese party to follow. The CDNAA opening ceremonies are scheduled for 9:00 a.m. Monday and will be followed

by the annual meeting at 10:30 a.m. Cocktails at 1:00 will precede the luncheon to be sponsored by the Ottawa Dental Nurses and Assistants Association. The evening will allow a free night in Toronto.

The program for Tuesday, October 25, will be sponsored by the Accreditation Division of the Ontario Dental Nurses and Assistants Association and features three top quality speakers in the field of dentistry plus a television personality as the luncheon speaker. The first presentation will be given by Dr. David Banting and will deal with "Facts and fallacies of flossing". The second speaker, Dr. William Dowhas, will examine "Oral surgery: a panoramic view" and, finally, Dr. J. Wright will examine "The role of the dental auxiliary in the behavioural management of children". Bill

Walker, well-known T.V. broadcaster, will speak to delegates attending the luncheon. The title of his presentation is "Nothing serious".

During the afternoon free time will be allowed for visiting the Trade Show and Table Clinics at the Automotive Building. At 6:30 p.m. the Presidents' Cocktail Party will be held and dinner and entertainment will be featured in the evening beginning at 8:30.

On Wednesday morning at 8:30 a breakfast will be held sponsored by the Waterloo - Wellington Dental Nurses and Assistants Association. The presentation of trophies will follow the breakfast. From 10:30 on, delegates will be free to take part in the FDI/CDA Congress program, including the Canadian Hoedown and fun night scheduled for the evening.

Dental students to present table clinics at FDI/CDA Congress

On Monday, October 24, the outstanding student clinician from each of Canada's 10 dental schools will present his/her table clinic program to delegates and visitors attending the FDI/CDA Toronto Congress.

For this purpose a table clinic is defined as a *table top* demonstration of a technique or procedure concerned with some phase of treatment, diagnosis or research related to the profession of dentistry that can be shown or demonstrated in no more than 15 minutes.

The student table clinics have been a feature of the Canadian Dental Association's annual convention since the program was inaugurated in 1971.

The program is administered by CDA's Office of Student Affairs and all costs, including travel expenses for the student clinicians, are underwritten by the Canadian Fund for Dental Education through special grants from the L.D. Caulk Company of Canada and Dentsply Canada Limited.

Message from the convention chairman



It is both an honor and a pleasure for the Ontario Dental Nurses and Assistants Association to act as host for the Canadian Dental Nurses and Assistants Association's Annual Convention to be held October 23-27, 1977, at the Holiday Inn in downtown Toronto. This year's convention is being held in conjunction with the 65th Annual World Dental Congress of the Fédération Dentaire Internationale.

As President of the ODNA, I have enjoyed working under the capable direction of Dr. William McIntosh, Chairman of the FDI/CDA Congress Organizing Committee, and with the most appreciated assistance of our

appointed committee. It has been a challenge for our Association to host this meeting, as this is the first time Canadian members have had the opportunity to participate in a World Congress.

An extensive program has been compiled for your benefit and pleasure. We have tried to include educational, scientific and social activities, beneficial and enjoyable to everyone in attendance.

Toronto is all the things a city should be. With a population of over two and a half million people, it offers the finest in accommodation, dining, atmosphere, shopping and unexcelled sight-seeing within the city and at nearby points of interest.

Shuttle bus service will be available for events held outside the Holiday Inn, including the Dental Trade Show featuring exhibits from North America and other countries throughout the World.

The Board of Directors of the ODNA extend a warm welcome to all dental nurses and assistants world-wide to join us in this, your convention.

*Pat Miller, CDA
ODNA President
Convention Chairman*

WHY RESEARCH?

Inaugural Address

G. S. Beagrie, DDS (Edin), FDSRCS (Edin), FRCD(C)

The use of research

Lay people have many misconceptions regarding the value of dental research. They hear and see money spent on it, but what does it mean to them — the taxpayers? Are they being provided with better dental health care? Are methods of treatment improving? Is there more dental disease prevention?

One view of the layman is that science in general is cloaked in mystique — understood only by a group of odd people called “research scientists”. Whether we like it or not, we live now in an age of “accountability” where, in all countries, the spending of tax monies requires explanation to the people. As researchers, we have been poor in our communication to society, often arguing that we have no time to explain. As a result, the scientific journalist tends to take over and this has danger, for it is the sure way to introduce innuendo, half-truths and even nonsense, which can cause both public and professional concern. There is need, therefore, to improve this aspect of public relations.

Lay people are not the only group who have difficulty in understanding dental researchers. Unfortunately, this exists even within the profession. Thus, we are faced with the “them and us” attitude — an attitude which is undoubtedly to the detriment of the profession of dentistry to which we are all attached. I do not mean to infer that the dental practitioners dislike researchers or that researchers in dentistry dislike their clinical colleagues in practice. The watersheds of their professional lives, however, have for too long been running in different direc-

tions, to the detriment both of dentistry and the public we are all out to serve.

Organizations

I believe though, that here too the “wind of change” is in evidence and I think that internationalization is one of the “keys” to the development and extension of this. There are, as we know, two large international organizations in dentistry, representing the profession on a world wide basis. It was the intent of the founding fathers of these organizations to provide a location for the development of ideas amongst colleagues with similar interests. Both the International Association for Dental Research and the Fédération Dentaire Internationale have expanded to huge memberships since their inception. The aims of both — to improve communication of ideas and dental services to mankind — have been realized but for each to a large extent this has occurred in limbo.

It would seem there is need for our organizations to relate more closely to the sentiments expressed in 1948 in the Declaration of Geneva. This emphasizes a wider interpretation of the Hippocratic Oath. Instead of focusing on the health of one patient, it calls for the broader concept of embracing humanity as a whole.

Teaching Institutions

Research, being the challenge of axioms, causes it to be demanded for the progression of any profession and no more is this so than in teaching institutions. Research is an attitude of mind, and training in such attitudes is the work of teachers. The use of research then is to avoid the creation of a profession swallowed up by technology and capable instead of scholarship and furtherance of knowledge. Without research in the present and future, dentistry will remain stagnant and dentists mere technologists, with

the public badly served as a result.

The social significance of research

I have already referred to the need for accountability in the present actions of the professionals. Thomas Carlyle is quoted as saying that “our main business is not to see what lies directly at a distance, but to do what lies already at hand”. Is this a requirement to provide social significance to research? I think not, for, with all research, what is distant to some, is at hand to others and there is a need to accommodate both approaches if progress is to be made in the advancement of the science of dentistry.

On the other hand, there is need to look to applied research to make an impact on the citizen, and to demonstrate that changes occurring through research *are* having a significance on how the patient’s dental health is being improved.

Present day mass media through their varied programs have made the public aware of their right to become involved in decision making policies concerning health science professionals. As a result, professional authority is rarely accepted without question and experts are suspected rather than respected, and their research actions constantly questioned.

It would seem expedient under these circumstances and in the age of the Alvin Toffler “Eco-spasm” report to project “futures research” for dentistry and thus gain public respectability and economic support with understanding. In Toffler’s words, “Futurism” differs from planning of old “by reaching beyond economics to embrace culture; beyond transportation to include in its concerns, family life, and many other dimensions of reality.” In the context of dental research, this relates monies spent to society’s needs. But society here is a global one and the monies used of multinational or international origin.

The internationalism of research

Let me start by examining the private sector.

In the private sector, dental research has been and still is well supported on an international level, whether by conferences, symposia, direct grant or general contract research. All these methods of support are well exemplified by the international efforts of Colgate-Palmolive Company, Johnson & Johnson Ltd., Proctor and Gamble Company, Warner-Lambert Company, and the 3M Company, to name but a few.

However, the use and the misuse of research here too takes its toll. New drug laws and controls by governments are placing ever increasing strains on private source funds for research and development. Known effective methods using specific drugs to control dental disease are not allowed to be made available to manage disease processes. The public are therefore being protected from apparent drug hazards but not from disease and discomfort.

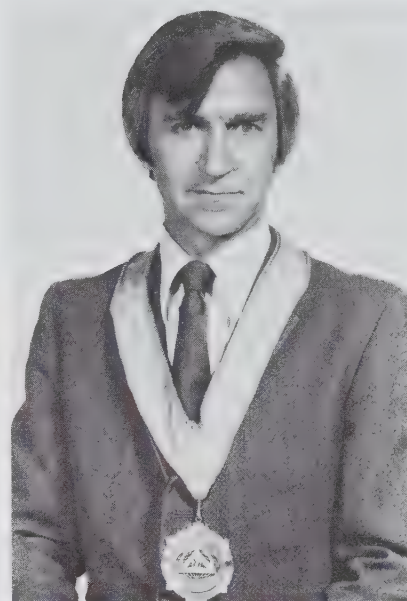
Of necessity, companies are being forced to cut back in their research efforts, to the detriment of the service that their products can give to society. It is appreciated that government policies are meant to be protective of the public and for the avoidance of an equivalent of the thalidomide disaster. However, where there is evidence of control without risk, there is denied to the public effective methods and/or drugs for the reduction of dental disease. Thus, the dental public health suffers because of bureaucracy. I previously talked of the need for accountability for dental research. It would seem that the same measure of accountability is necessary too for governments. In the present circumstances, drug laws are developed to protect society. The dental researcher has a role to play in this too. He must use his background

At the 55th General Session of the International Association for Dental Research held in Copenhagen, Denmark, March 31 to April 3, 1977, Dr. G. S. Beagrie of Toronto was installed as President of the Association. The article presented here is a synopsis of his inaugural address given at this meeting.

A native of Scotland, Dr. Beagrie received his licenciante in dental surgery from the Royal College of Surgeons, Edinburgh, in 1947 and his Fellowship in the College in 1954. He completed postgraduate studies at the University of Michigan and the University of Oslo, Norway, and, in 1966, he was awarded his Doctorate by the University of Edinburgh. From 1963 to 1968 he served as Professor and Chairman of the Division of Restorative Dentistry, University of Edinburgh.

Dr. Beagrie came to Canada in 1968 and, a year later, became a Fellow of the Royal College of Dentists of Canada. He was appointed Professor and Chairman of the Division of Clinical Sciences at the University of Toronto's Faculty of Dentistry in 1968 and, in 1974, was appointed Chairman of the Graduate Department of Dentistry and Director of the Division of Postgraduate Dental Education, University of Toronto.

In addition to his university appointments, Dr. Beagrie has served on a large number of councils and committees in the United Kingdom and Canada, as well as at the international level.



Dr. G. S. Beagrie

Since 1971, he has served as Director of the Dental Training Grant Program for the Medical Research Council of Canada. He was Dental Editor of the Canadian Dental Association's Tape Cassette Continuing Education Program for four years and, in 1972, was named Chairman and Organizer of the CDA Conference on Continuing Dental Education.

Since 1975, Dr. Beagrie has served as Consultant to the Scientific Assembly Committee of the Fédération Dentaire Internationale and Consultant in Dental Education to the World Health Organization. An internationally renowned author and lecturer, Dr. Beagrie is currently President-elect of the Royal College of Dentists of Canada.

knowledge to provide industry with support which is in the interest of the public.

Dental products, drugs and devices are best assessed by unbiased scientific dental personnel — both basic and clinical. We must neither fail the public nor industry by apathy and complacency.

A. N. Whitehead in "Science and the Modern World" suggests that "Men require of their neighbours something sufficiently akin to be understood, something sufficiently different to provoke attention and something great enough to command admiration."

Surely in this context is it not necessary to mention the "internationalism" of the 5 Nation collaborative study of oral health manpower systems initiated between the United States Public Health Service and the World Health Organization? So much so is the original study provoking attention and commanding admiration, that three further countries have indicated their desire to join the study, and in Canada, a pilot project in the province of Ontario now underway. From these and other projects, international research is making its mark on society, governments and our culture.

Culture is in a constant state of change and these changes undoubtedly have their roots related to the scientific endeavours of research.

With Francis Bacon began the scientific revolution in which we are still engaged. He, along with Galileo and Descartes, brought forth a new aspiration in man, honestly to investigate and critically to consider everyday facts in natural science. From Bacon's time onward into the 19th century, universities served these approaches of science but they played little or no part in their advancement. The majority of universities were church based and founded. Thus scientific studies were branded repugnant and immoral.

How much different are the universities today? In our own discipline (with very few exceptions), it is only through the universities and related institutions that dental research is actively pursued.

But even in the universities at present there is the challenge of the modern day function of a university. As in the days of Bacon, with the challenge of natural science, so in the present day is the challenge of the role of the universities in the "Technological Society".

How do we, as dental researchers, fit into such a pattern? In the period of emerging industrialism in Europe and North America, Halsey makes interesting comparisons of the educational characteristics seen in the United States of America, Russia and the United Kingdom from 1900 onwards. Through the 19th Century and up to the present day, there has been a progressive secularization of higher learning to increase the potential of universities as sources of technological and social change, so that universities now occupy a place as an economic foundation for a new type of society. In the new technological society, educational institutions have been expanded not only to exercise research functions but also to play a role in the central economy. In Toffler's terms, economics embraces culture.

John Kenneth Galbraith, in his recent book, "The New Industrial Estate", has a message which is worth considering in this context. Supportive of Halsey's observation that the universities now occupy a place in the basic development of the economy of nations, he goes on to coin the phrase of Price and refers to the pressure of the "Scientific Estate". In his argument he demonstrates that the techno-structure has become dependant upon the scientific estate for its manpower and the advancement of the economy. The educational explosion which has brought about such dependence is exemplified in the figures of 1968 from the United States Department of Health, Education and Welfare. Thus we see that in 1900, the United States of America had 238,000 students registered in universities, 3,377,000 in 1959, while by 1967 the figure was 6,348,000 — a doubling of the numbers in eight years. Dental science and dental research have grown in relation to this general expansion. How will this effect dentistry?

It would seem to me that we can see in society a possible challenge to dentistry and that would be the influence of the technological society back to the university. We may have to face even more than now the decision as to what the dentist of the future will be — a technologist? A manager? A scholar? It is probable that we will see the introduction of a two or three tier system in which the "in-mouth worker" will be trained at different levels. Such a suggestion may seem repugnant to most of our colleagues, but society will force this upon us, given certain circumstances. A repair service is best handled by a technician, but we have to convince society that dentistry is more than a repair service.

The dentist elite to be developed for the technological age to fit the demand of society will require to be a technologist, a manager *and* a scholar with a broad based university education in which research activity will be uppermost.

I believe that the demands of society may well force us into acceptance of such a system. Further, that the profession as a whole will favour it. Research, however, can again prove its usefulness in providing us with models or model systems to determine the most suitable dental services for the communities being served.

I referred earlier to the United States Public Health Service and the World Health Organization collaborative study. It is from research material such as this that a design of a system best suited to the care of the populace in various countries will be derived. International co-operation in applied and basic research must be shown to be of paramount importance for the realization of improved dental health for mankind.

The Director General of the World Health Organization has set a goal of "an acceptable level of health evenly distributed throughout the world's population by the year 2000." Full support and co-operation from the Fédération Dentaire Internationale and the International Association for Dental Research are necessary to accomplish this goal.

SECONDARY OSTEOARTHROSIS (OSTEOARTHRITIS) OF THE TEMPOROMANDIBULAR JOINT

Ralph Ian Brooke, BChD, LDS, MRCS, LRCP,
FDSRCS, FRCD(C)
London, Ont.

The clinical findings in 34 cases of secondary osteoarthrosis are given. The differential diagnosis, treatment and etiology of the condition are discussed. The importance of correct diagnosis for a disorder which may be treated by relatively simple therapy is stressed.

After the age of 20, degenerative changes begin in many joints but do not give rise to any symptoms. When degeneration becomes excessive and symptoms appear, the condition is called osteoarthrosis. This term is preferred to "osteoarthritis" which connotes an inflammatory change; the condition is not inflammatory but degenerative and it is only custom and facility of recognition which justify continued use of the term osteoarthritis(1).

Primary and secondary osteoarthrosis

When there is an inherited predisposition to osteoarthrosis, the condition is termed "primary". Primary osteoarthrosis affects multiple joints, most commonly the terminal interphalangeal joints of the fingers. If it occurs at all in the temporomandibular joint (TMJ), it is extremely rare(2).

Secondary osteoarthrosis usually follows excessive or continued joint trauma. It may thus have many causes(3), including previous fracture or inflammatory joint disease, hypermobility syndromes, anatomical disturbances and neurologic lesions causing sensory impairment (the most famous example of which is the now rarely seen Charcot's joint of syphilis).

Osteoarthrosis of the TMJ

Secondary osteoarthrosis is a common condition which is well recognized, but its manifestation in the temporomandibular joint is often incorrectly described. Frequently, no distinction is made between the primary and secondary varieties of the condition and it is often confused with other joint problems, e.g. myofascial pain dysfunction syndrome (MPDS) with which it shares some characteristics. The purpose of this paper is to review the clinical and radiologic findings of 34 cases of secondary osteoarthrosis of the TMJ and to discuss its differential diagnosis and treatment.

Clinical findings

The 34 cases were found in a series of 327 cases of temporomandibular joint problems seen in a department of oral medicine clinic in a four-year period, i.e. about 10 per cent of the TMJ lesions seen were osteoarthrosis. This is a similar figure to the 8 per cent found by Toller(4). Thirty-three patients were female and one was male. This overwhelming female preponderance will be commented upon later.

The age of onset is seen in Fig. 1. The average age is significantly higher than seen in patients with myofascial pain dysfunction syndrome. The symptoms and signs encountered are summarized in Table 1. Pain in the region of the affected joint, especially on opening the jaw, was or had been present in all cases. This was often associated with tenderness of the condyle when it was palpated through the external auditory meatus. Spasm in the muscles of mastication was often present, and this resulted in limitation of jaw movement in 62 per cent of cases. Thirty-eight per cent of patients had sudden onset of symptoms and 62 per cent gradual onset. Crepitus in one or both joints was evident in 76 per cent of cases. This sound was quite different from the cracking or popping sound described by patients with MPDS and was described by the patient as a "grating" or "crunching" sound. The duration of symptoms when the patients were first seen in the clinic are shown in Fig. 2. All patients were referred by physicians or dentists and frequently had seen several practitioners. For this reason, the average length of duration of symptoms was often substantially longer than that from time of appearance of symptoms to that of patient first seeking treatment.

Seven patients (20 per cent) complained of symptoms in the other TMJ but in only one case was radiographic evidence of joint disease present. Eight-five per cent of patients had an adequate occlusion. The remaining 15 per cent had natural dentition which showed malocclusion (usually inadequate number of teeth) or ill-fitting full upper and lower dentures, frequently with inadequate vertical height. Three patients gave a history of trauma to the TMJ and six of myofascial pain dysfunction syndrome.

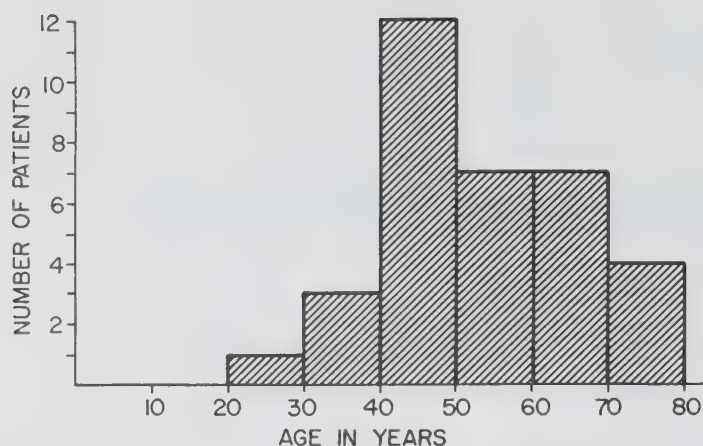


Fig 1 Age at initial visit of 34 patients with osteoarthritis of temporomandibular joint.

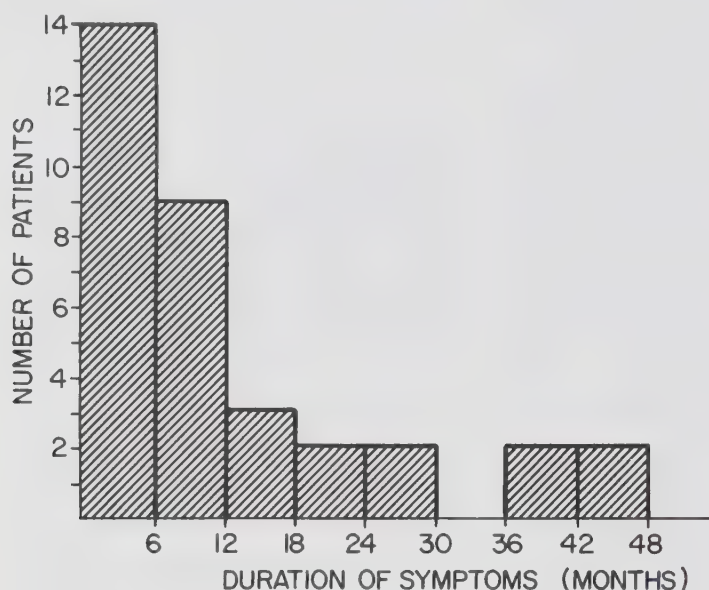
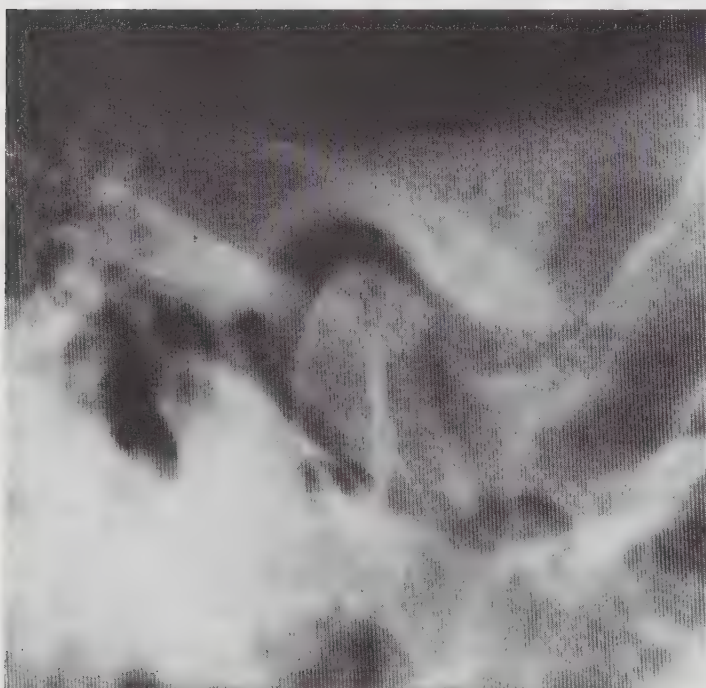


Fig 2 Duration of symptoms in 34 patients with osteoarthritis when first seen (4 patients had symptoms for more than 48 months and are not included).

Fig 3 Radiograph of patient with early osteoarthritis showing flattening of condyle head.



Signs and symptoms of secondary osteoarthritis of TMJ in 34 patients Table 1

Symptoms/signs	No. of patients	%
Pain	34	100
Muscle spasm	21	62
Crepitus	26	76
Tenderness of condyle	25	74
Radiographic changes	24	71

Comparison of symptoms and signs of myofascial pain dysfunction syndrome and osteoarthritis Table 2

	MPD syndrome	Osteoarthritis of TMJ
Peak age range	15-30 years	40-50 years
Pain	Often worse in morning	Often worse in evening
Maximum tenderness	Muscles of mastication	Condyle
Limitation of movement and deviation	Almost always present	Often present
Joint sound	Clicking, snapping, popping	Crunching, grinding, grating
Radiographs	No change	Erosions, etc.

Radiographic changes

On their first visit, 70 per cent of the patients showed radiographic changes in the condyle. No changes were observed in the upper part of the joint in any of the patients. The early changes were quite subtle and had often been missed by radiologists. They consisted of slight flattening of the condyle head (Fig 3). Later, changes showed small excavations or cyst-like spaces in the surface of the condyle or a concavity of the condyle head (Fig 4). The most advanced changes were of gross erosion of the condyle, the normal bony architecture being lost (Fig 5).

Differential diagnosis

Rheumatoid arthritis can usually be excluded because of the absence of involvement of other joints and the raised erythrocyte sedimentation rate, although, just possibly, the TMJ could be the first joint to be involved with this condition. Infective arthritis can be excluded because of the absence of an infective process in a nearby part. By far the commonest condition from which osteoarthritis must be distinguished is MPDS.

Table 2 sets out the main difference between the two conditions. The biggest problem in diagnosis is with those patients whose signs and symptoms do not fall clearly into either category, and it is sometimes a matter of some time before the obvious features of their problem become clear-

cut. The presence of radiologic changes is important in the final diagnosis of osteoarthritis.

In the present study, no patients had signs or symptoms of *primary* osteoarthritis in other joints, but 26 per cent had symptoms of secondary osteoarthritis related to other joints.

Treatment

All patients were initially given a course of physiotherapy, consisting of ultrasound, 10-minute sessions, three or four times per week for three or four weeks. Simple analgesics were prescribed, especially if the patient was having great discomfort. Attention was paid to any gross dental problems.

If conservative therapy did not give relief, intra-articular injections of hydrocortisone were used. Eight patients treated in this way gained relief of pain for about two months. It should be noted that when condylar erosion is present or if the injections are repeated, they may have the effect of increasing the amount of erosion. However, this usually results in a pain-free joint which shows little limitation of function, and this happy outcome can hardly be regarded as the same problem it would be in a weight-bearing joint.

Seventy-eight per cent of the patients were pain free one year after being seen, but 47 per cent still had crepitus. These results compare with those obtained by very sophisticated surgery, e.g. insertion of prosthesis into the joint(5).

Mandibular condylectomy should only be used as a last resort when conservative therapy and intra-articular injections have failed. Of three cases treated in this way, two have become pain free and one had substantial relief of symptoms.

Discussion

The existence of primary osteoarthritis of the TMJ has been called into question by some workers(2). Whether or not one agrees with them, the existence of secondary osteoarthritis of the TMJ is beyond doubt. It exists quite independently of other joint problems and is frequently mistaken for MPDS, with which it has some similarities. This may be because some of its features are described incorrectly even in some standard textbooks(6). Its most important distinguishing features are the older age of the patient, the "grating" type of joint sound, the tenderness of the condyles and the radiologic changes. These radiologic changes are not always apparent at the initial visit, but will eventually be seen in all cases of osteoarthritis.

Etiology

Two questions would appear to be of importance when considering the etiology of osteoarthritis of the TMJ:

1. How much of a role does trauma play?
2. Does long continued MPDS produce trauma to the joint?

We know that osteoarthritis in other joints may follow trauma and its incidence is increased with age(7) but, based

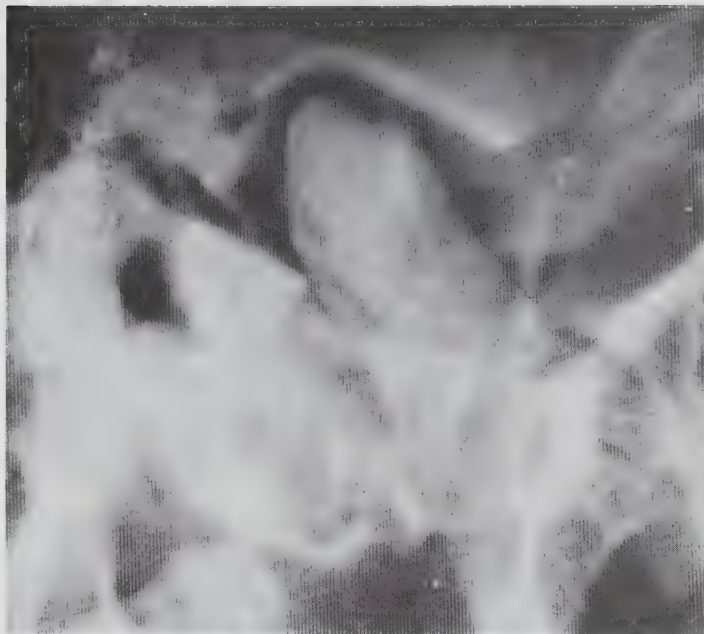
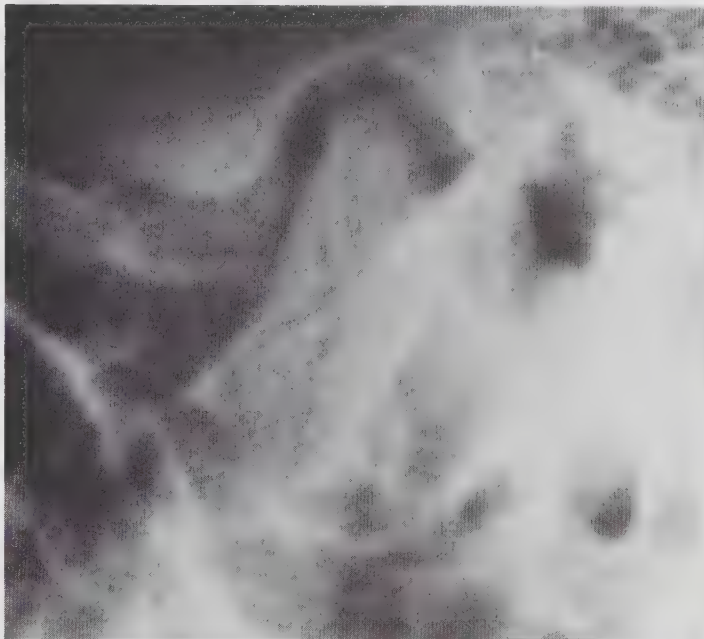


Fig 4 More advanced case showing concave appearance of condyle.

Fig 5 Advanced osteoarthritis with much destruction of condyle.



on their review of the literature, Kreutziger and Mahan(8) feel that trauma is relatively unimportant. However, the role of repetitive impulse loading on a joint surface as a factor in the etiology of osteoarthritis is coming once more to be accepted(9) and this type of trauma may follow MPDS, thus severe damage to the disk has been shown to occur in long continued cases of MPDS(10).

Four patients in our series had sustained injury to the joint and six had a previous history of MPDS. Other writers have indicated a higher incidence of MPDS in patients developing osteoarthritis(4). It thus would seem reasonable to suggest that long continued MPDS or other traumatic episodes may be factors in the etiology of osteoarthritis.

But what about patients with no history of trauma or MPDS, and why the female preponderance of the condition?

Continued on page 328

PATHOLOGIE DE L'ARTICULATION TEMPORO MANDIBULAIRE

R. Morency, DDS
Québec

Il s'agit d'une sommaire description des principales pathologies J.T.M., pouvant servir de base aux considérations plus détaillées dans les volumes suggérés à la bibliographie.

Tel que déjà décrit par plusieurs auteurs, dont Thoma, l'articulation temporo-mandibulaire est vraiment unique en son genre, pour plusieurs raisons. Tout d'abord cette articulation est vraiment *bilatérale*, c'est-à-dire qu'il n'y a jamais de mouvement unilatéral pour cette articulation à cause du pont osseux rigide représenté par la mandibule. D'autre part la surface articulaire est couverte par un tissu fibro--cartilagineux avasculaire plutôt que par un cartilage hyalin. Troisièmement, la dentition agit comme un guide pour les mouvements de cette articulation. Quatrièmement, un disque fibreux situé à mi-chemin entre l'os temporal et la surface articulaire divise l'articulation en deux compartiments, le compartiment supérieur agissant comme une surface de glissement et le compartiment inférieur agissant comme une charnière. Cinquièmement, il y a des relations fonctionnelles et anatomiques étroites entre la dentition, les tissus péri-dentaires, les muscles de la mastication, et l'articulation temporo-mandibulaire. Enfin, des procédés diagnostiques traditionnels comme la biopsie sont peu utilisables et peut être utilisés pour cette articulation.

Nous verrons successivement les anomalies de développement, les anomalies post-traumatiques, les troubles inflammatoires, l'ankylose, et les néoplasies.

A. Anomalies de développement

Etiologie: Pour la plupart de ces anomalies, il est difficile de préciser la cause exacte. Quelques-unes sont congénitales, par atteinte génétique ou autre, et d'autres se développent après la naissance.

1) Hypoplasie des condyles:

a) Congénitale: L'exemple type en est la dysostose mandibulofaciale. Cette maladie est retransmise de façon autosomale dominante. Les manifestations en sont une hypoplasie bilatérale du mandibule et des ramus. Il va s'en dire que cette anomalie est rare.

b) Acquise ou secondaire: Ce type d'hypoplasie se produit par atteinte du condyle lors de la croissance active. Cette atteinte peut être de type mécanique (traumatisme) ou secondaire à une inflammation comme l'arthrite rhumatoïde juvénile. Lors d'une atteinte de type mécanique, la déformation faciale peut devenir évidente plusieurs mois après la cessation du facteur causal.

Il peut y avoir atteinte unilatérale ou bilatérale des condyles. Dans les cas d'atteinte bilatérale, une micrognathie peut être associée avec surpopulation dentaire et "open bite".

2) Agénésie des condyles:

Cette anomalie est rare, le plus souvent unilatérale, et souvent associée à d'autres malformations, de l'oreille par exemple.

3) Hyperplasie des condyles:

a) Unilatérale: Cette anomalie se produit surtout après la puberté et touche les deux sexes également.

Etiologie: Certains auteurs mentionnent des facteurs d'hérédité alors que d'autres insistent sur des facteurs locaux comme une inflammation focale du condyle avec hyperplasie secondaire.

A l'examen histologique la surface du condyle peut être régulière (lisse) ou non selon les cas.

Cliniquement, on note une asymétrie avec une déviation de la figure vers le côté sain avec mal occlusion.

b) Bilatérale: Il s'agit d'une anomalie de développement très rare.

4) Condyle mandibulaire double:

Il s'agit d'une anomalie rare, affectant la tête du condyle, rarement le col. Cette anomalie est le plus souvent unilatérale dans 85 pourcent des cas.

Les facteurs étiologiques sont obscurs.

B. Atteintes traumatiques

1) Traumatisme aigu:

Ce type de traumatisme provoque des réactions inflammatoires de l'espace articulaire (arthrite), incluant le ménisque (dégénérescence), la capsule et les ligaments. On enregistre une hémorragie intra-articulaire (hémarthrose) est possible avec toutes ses conséquences (V.G. ankylose). Il va s'en dire que une atteinte traumatique qui se produit chez les jeunes en croissance peut provoquer des dommages aux centres de croissance condyloaire.

Un traumatisme chronique provoqué par exemple par de la malocclusion, peut conduire à une dégénérescence du ménisque.

2) Sub-luxation:

Il s'agit d'une dyslocation incomplète du condyle hors de la cavité articulaire. Au contraire de la luxation, le patient peut en général replacer lui-même l'articulation. La sub-luxation peut être unilatérale ou bilatérale.

Les facteurs étiologiques peuvent être assez nombreux, entre autre un baillement, une chirurgie buccale ou dentaire, une intubation. Il va s'en dire qu'un traumatisme aigu ou encore un traumatisme chronique peuvent amener un relâchement de la capsule avec comme conséquence tendance à la sub-luxation. De plus des syndromes comme le syndrome de Marfan et le syndrome Ehlers-Danlos peuvent amener une hyperlaxité ligamentaire, d'où une plus grande tendance chez ces patients à la sub-luxation ou à la luxation.

3) *Luxation:*

Il s'agit d'un déplacement complet du condyle hors de la cavité articulaire. La patient ne peut en général réduire lui-même cette luxation. Dans la plupart des cas il s'agit d'une luxation antérieure; elle peut être uni ou bilatérale.

Les conséquences de la luxation peuvent être d'ordre inflammatoire ou hémorragique avec assez souvent une dégénérescence du ménisque.

Les causes en sont sensiblement identiques à celles de la sub-luxation.

C. Troubles inflammatoires

1) *Arthrite aiguë traumatique:*

Ce type d'arthrite est rare depuis l'avènement des antibiotiques. Cependant ce phénomène demeure possible dans aiguë le pronostic est relativement bon excepté dans les cas où il y a une hémarthrose importante et excepté chez les enfants où il peut y avoir dommage aux centres de croissance condyalaire.

2) *Arthrite infectieuse:*

Ce type d'arthrite est rare depuis l'avènement des antibiotiques. Cependant ce phénomène demeure possible dans les cas de plaies pénétrantes ou à partir d'une infection de voisinage (oreille, ramus de mandibule) ou encore par voie sanguine à partir d'une infection à distance.

Les agents étiologiques sont la plupart du temps le staphylocoque ou le streptocoque parfois l'actinomyces. Une arthrite gonococcique de l'articulation temporo-mandibulaire est possible dans environ 3 pourcent des cas de gonorrhée.

Macroscopiquement l'articulation en cause est gonflée et cliniquement la douleur est importante.

Si un bon drainage n'est pas établi, le pus peut éventuellement détruire l'articulation.

Dans la phase chronique, selon l'agent en cause, on peut assister à une destruction lente des surfaces articulaires avec éventuellement phénomènes de réparation sous forme de fibrose avec comme conséquence une ankylose de l'articulation en cause.

3) *Arthrite rhumatoïde:*

L'arthrite rhumatoïde est une maladie systémique du collagène par hypersensibilité probable aux toxines bactériennes (streptocoque). Cette arthrite est caractérisée par une inflammation progressive et chronique des articulations de l'organisme en général avec atrophie musculaire et raréfactions osseuses secondaires.

Cliniquement, les patients sont âgés de 20 à 50 ans environ. Dans 5 pourcent des cas, cette maladie se manifeste chez les enfants et est dite arthrite rhumatoïde juvénile. Les femmes sont en général atteintes trois fois plus souvent que les hommes. L'atteinte mandibulaire proprement dite varie de 10 à 50 pourcent des cas selon les séries rapportées dans la littérature. En général, s'il y a atteinte temporo-mandibulaire, les deux articulations sont touchées.

Cliniquement au stade aigu on constate un gonflement et une douleur articulaire avec limitation des mouvements; au stage chronique la douleur est moins importante et l'articulation devient progressivement ankylosée.

Microscopiquement, on observe les mêmes phénomènes que dans le cas d'atteinte des grosses articulations. Au stade aigu il y a tout d'abord oedème, congestion et inflammation des tissus synoviaux avec infiltration diffuse de cellules inflammatoires lympho-plasmocytaires dans tous les tissus articulaires. Ce stade aigu laisse progressivement la place à une phase chronique dite de réparation où il y a formation dans les tissus synoviaux d'un tissu de granulation appelé pannus; ce pannus envahit et détruit l'articulation de même que la surface du condyle avec résorption de l'os sous-jacent. On assiste ensuite à la formation d'adhérences.

La complication principale est l'ankylose fibreuse. Dans les cas d'arthrite rhumatoïde juvénile, on assiste dans quatre à 25 pourcent des cas à une micrognathie associée par atteinte des centres de croissance condyalaire.

4) *Ostéo-arthrite:*

Il s'agit d'une arthrite dégénérative non inflammatoire caractérisée par une détérioration et une abrasion des surfaces articulaires et aussi par la formation d'os "neuf" (ostéophytes) à la surface osseuse.

Ce type d'arthrite touche surtout les grosses articulations de l'organisme, celles portant le plus de poids. Les gens atteints ont en général plus de 50 ans. Selon certains auteurs la fréquence d'atteinte de l'articulation temporo-mandibulaire dans ce type d'arthrite serait d'environ 40 pourcent des gens âgés.

Cliniquement il y a peu de douleur. Les patients éprouvent surtout quelques craquements dans l'articulation temporo-mandibulaire de temps à autre. Une sub-luxation demeure possible.

A la phase chronique de cette arthrite, le condyle est aplati et élargi et la surface articulaire est nettement irrégulière. Le phénomène morphologique principal dans la phase de début serait une dégénérescence de la surface articulaire du condyle avec formation de fissures de cette surface.

La complication principale à craindre après une longue évolution est l'ankylose.

D) *Ankylose*

Elle peut être unilatérale ou bilatérale, de causes intra-articulaires ou extra-articulaires, de type fibreux ou osseux, partielle ou complète. Certains auteurs considèrent qu'une ankylose est complète si l'ouverture de la bouche est de 5 mm ou moins.

L'ankylose de type intra-articulaire est la plus fréquente.

Les facteurs étiologiques sont nombreux de type congénital ou acquis. Shafer en énumère plusieurs:

Traumatisme à la naissance (forceps).

Traumatisme dans les premières années de vie.

Mauvais alignement d'une fracture condyalaire.

Syphilis congénitale.

Inflammation primaire v.g. arthrite rhumatoïde.

Inflammation par extension du voisinage, v.g. mastoïdite.

Inflammation secondaire à une septicémie.

Métastases d'un cancer ailleurs dans l'organisme.

Radiothérapie.

Tel que mentionné plus haut, histologiquement, l'ankylos est surtout fibreuse mais il peut également y avoir une union osseuse.

E. Néoplasies

Les néoplasies de l'articulation temporo-mandibulaire sont très rares, mais quand elles se produisent elles peuvent être du même type que celles observées ailleurs dans l'organisme pour le même type de tissu. Il est donc inutile d'énumérer ici dans le cadre de ce cours toutes ces possibilités.

Dans le cadre des néoplasies bénignes, quelques auteurs ont rapporté des ostéomes et des chondromes de même que des hémangiomes.

Les néoplasies malignes y sont très rares. Quant on en retrouve il s'agit surtout d'extension de tumeurs de la parotide ou encore de métastases d'un cancer provenant d'un autre endroit de l'organisme.

F. Divers

L'hyperpara-thyroïdisme secondaire peut diminuer la croissance du mandibule et du condyle.

Lors de la goutte, il peut y avoir dépôts d'acide urique dans l'articulation temporo-mandibulaire.

L'acromégalie peut favoriser une croissance excessive du condyle avec troubles secondaires de l'articulation temporo-mandibulaire.

Enfin la maladie de Paget (ostéite déformante) peut atteindre l'articulation temporo-mandibulaire surtout par augmentation de volume du condyle.

Dr. Morency est professeur de pathologie buccale à l'Ecole de Médecine Dentaire, à l'Université Laval de Québec.

- 1 Thoma's, Oral Pathology, Gorlin et Goldman, Mosby, 1970 p. 577-606.
- 2 Shafer, Hine, Levy, A Text Book of Oral Pathology, W.B. Saunders, 1974, p. 648-664.
- 3 Oral Sciences Reviews, Worth, Oberg, Polwillo, Vol. 6, 1974, Temporo-Mandibular Joint Function and Dysfunction.
- 4 Ogus, Rhumatoïd Arthritis of the Temporo-Mandibular Joint, British Journal of Oral Surgery, 12, p. 275-284, 1975.
- 5 Seymour et al., Temporo-Mandibular Ankylosis Secondary to Rhumatoïd Arthritis, O.S. O.M. O.P., vol. 40, no. 5, novembre 1975, p. 584-589.
- 6 Chue, Gonococcal Arthritis of the Temporo-Mandibular Joint, O.S. O.M. O.P., vol. 39, no. 4, avril 1975, p. 572.
- 7 Kreutziger et Mahan, Temporo-Mandibular Degenerative Joint Disease, O.S. O.M. O.P., vol. 40, p. 165-182, août 1975.
- 8 Kreutziger et Mahan, Temporo-Mandibular Degenerative Joint Disease, O.S. O.M. O.P., vol. 40 no. 3, p. 297-319, septembre 1975.
- 9 Couly, Ureau et Vaillant, Le Complexe Dynamique du Ménisque Temporo-Mandibulaire, Revue de Stomatologie, Paris 1975, 76, no. 8, p. 597-605.

Secondary osteoarthritis ...

Continued from page 325

The interval between the occurrence of the causative factor and the onset of osteoarthritis in other joints may be very long indeed(11). Could it be that some of our patients had forgotten the traumatic episode? Furthermore, Murray(12) has stated that, when several thousand patients were examined by him in a survey for dental caries, very large numbers had a clicking jaw which was unassociated with pain. We know that MPDS is far commoner in women than men. One possibility is that a subclinical type of MPDS exists which, because of its lack of symptoms, is never treated and leads to osteoarthritis in this group of patients.

Whatever its etiology, secondary osteoarthritis of the TMJ does seem to have definite characteristics and the importance of diagnosing this painful condition cannot be overemphasized as a large proportion of the patients obtain relief of symptoms with very simple treatment.

Dr. Brooke is professor and chairman of the Department of Oral Medicine, Faculty of Dentistry, University of Western Ontario, London, Ontario; and chief of dentistry at the University Hospital.

- 1 Jaffe, H. L. Metabolic, degenerative and inflammatory dis-

eases of bones and joints. Philadelphia, Lea & Febiger, 1972.

- 2 Chalmers, I. A. and Blair, G. S. Is the temporomandibular joint involved in primary osteoarthritis? Oral Surg 38:74, 1974.
- 3 Bodley, Scott R. Price's textbook of the practice of medicine. Ed 11. London, Oxford University Press, 1973.
- 4 Toller, P. A. Osteoarthritis of the mandibular condyle. Brit Dent J 134:223 and 231, 1973.
- 5 Morgan, D. H. Surgical correction of temporomandibular joint arthritis. J Oral Surg 33:766, 1975.
- 6 Shapiro, B. L. and Gorlin, R. J. In Gorlin, R. J. and Goldman, H. M. (Eds.) Thoma's oral pathology. Ed 6. St. Louis, Mosby, 1970.
- 7 Brown, R. and Lingg, C. Musculoskeletal complaints in industry. Arthritis Rheum 4:283, 1961.
- 8 Kreutziger, K. L. and Mahan, P. E. Temporomandibular joint degenerative disease. Pt. 1. Anatomy, pathophysiology and clinical description. Oral Surg 40:165, 1975.
- 9 Radin, E. L., Paul I. L. and Rose, R. M. Role of mechanical factors in pathogenesis of primary osteoarthritis. Lancet 1:519, 1972.
- 10 Carlsson, G. E., Öberg, T., Bergman, F. et al. Morphological changes in the mandibular joint disk in temporomandibular joint pain dysfunction syndrome. Acta Odont Scand 25:163, 1967.
- 11 Kaufman, L. Aetiology of osteoarthritis of the hip. Arch Orthop Unfallchiv (64)2:164, 1968.
- 12 Murray, J. B. Personal communication.

A DIRECT TECHNIQUE FOR POST-CORE CASTINGS

L. Metrick, BA, DDS
Ottawa

Many methods are available for fabricating a post and core for an endodontically treated tooth. These methods may involve a direct or indirect technique. A direct technique has been described previously by Metrick (1). It has now been improved to a point where it is simple, speedy and yields consistently well-fitting castings.

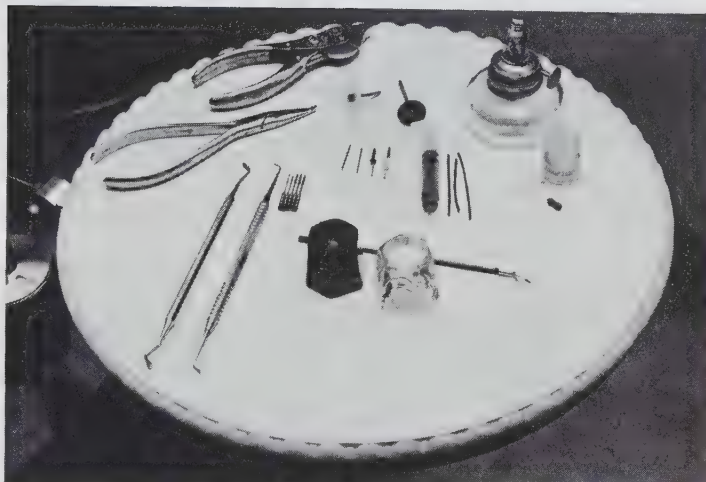
Materials and method

First, prepare the post-hole by reaming the root canal with Peeso engine reamers, numbers 1 to 6 successively, to a point about four millimeters from the apex. If the root is narrow, ream to number 4 only. Groove the cervical dentine to offset potential rotation of the casting.

Next, after lubricating the post-hole with microfilm, insert a piece of lightly softened mm-round inlay wax and compress it with an amalgam condenser. With pliers, force a lightly flamed sprue nail into the wax to the end of the post-hole. Chill the nail with cold air and withdraw the wax impression slowly to test the frictional retention. Then dip the wax into microfilm and return it to the post-hole.

Brush an acrylic core into the sprue nail to simulate a crown preparation. Withdraw the sprue nail and disc the core with coarse sandpaper to improve the preparation. The post core can now be invested for casting. The sprue nail is removed during the burn-out stage. When casting is complete the post part can be serrated with a disc to enhance the cementation. The core should be checked and reduced, if necessary, to permit enough occlusal clearance to accommodate the full crown restoration.

Mm-round inlay wax is not commercially available. A large supply of it can be made in a few minutes by inserting a stick of inlay wax into a disposable plastic 3-mm syringe, and immersing the syringe into boiling water. This softens the wax just enough to permit the plunger to extrude it through the orifice and onto the counter top.



The sprue nail can be made from a finishing nail of about a millimeter or less in diameter. Cut off the head and, using a Joe-Dandy disc, score 12mm of the pointed end with a series of nicks about 0.3mm deep. These nicks when flamed ensure the withdrawal of the wax pattern.

Figure 1 illustrates the armamentarium needed for this technique.

Dr. Metrick is engaged in private general practice. His address is: 200 Fuller Bldg., 75 Albert St., Ottawa, Ont.

1 Metrick, L. Canal obliteration with a post crown. J Canad Dent Ass 27:585, 1961.

PERSISTING MAXILLARY DIASTEMA: DIFFERENTIAL DIAGNOSIS AND TREATMENT

F. Popovich, DDS, MScD, FRCD(C)
G. W. Thompson, DDS, PhD, FRCD(C)
P. A. Main, BDS, DDS
Toronto

This study provides clinical guidelines for distinguishing between those diastema cases which should close normally and those which possess characteristics that may be responsible for its persistence. Utilizing a sample of 471 children from the Burlington Growth Centre, a system of frenum and intermaxillary suture typing was utilized and related the various factors contributing to diastema persistence. The authors outline a suggested procedure for assessing the genetic and developmental contributions to persisting maxillary diastemas.

As early as 1924, Tait (1) proposed that the maxillary frenum was sometimes associated with, but not the cause of, maxillary diastema, and this was supported subsequently by others (2-10). All these workers showed that most maxillary diastemas in the early mixed dentition stage close during normal growth and development with the eruption of the permanent lateral incisors, canines and second molars. Despite this evidence, many clinicians still routinely recommended frenectomy as a necessary space-closing procedure that should be carried out when the upper lateral incisors begin to erupt.

The purpose of this study was to provide a guide for the clinician so that he can distinguish between those diastema cases which should close normally, and those which possess one or more of the characteristics that may be responsible for or contribute to its persistence.

Material and methods

The present study concerns 471 children from the Burlington Growth Centre; these were the total number with records at nine years and again at 16 years of age. All measurements were made using a Boley gauge on the plaster casts at age nine and 16 years, and annually for the 110 children of this group with annual records and possessing a diastema of 0.5 mm or more at age nine.

Of the 471 children who were evaluated, 230 (48.8 per cent) had a diastema of 0.5 mm or greater at age nine. At age 16, 392 (83.2 per cent) had no diastema and 35 (7.4 per cent) had less than 0.5 mm (11).

The 230 children who had a diastema at nine years were all assessed for the various characteristics by studying the dental casts and calculating Bolton discrepancy, degree of spacing, crowding, missing teeth, etc. A system of frenum typing had been developed which described six types; namely, thick and thin and either high, medium or low attachments. Types 1 and 2 are high thin and high thick attachments respectively. Types 3 and 4 are medium thin and medium thick. Types 5 and 6 are low thin and low thick attachments. A low attachment is taken to be at or just above the gingival margin, and high is taken to be high up on the alveolus approximately at the level of the apices of the incisor teeth. Frenum type was assessed from dental casts at ages 9, 12, 14 and 16 years.

The type of intermaxillary suture was determined from posteroanterior cephalograms at ages 9, 12, 14 and 16 years. These were classified into four types (Fig 1): (1) normal V-shaped bone bisected by the intermaxillary suture; (2) normal bone with a wide and shallow suture; (3) spade-shaped bone bisected by intermaxillary suture; and (4) W-shaped bone with a deep suture.

Results

After comparing the various characteristics associated with the persistence of diastema at age 16, it was concluded that generalized spacing was the significant factor. An analysis of the frenum type revealed that the children who had space > 0.5 mm at age 16 had frenum types 1, 2, 3 and 4, but in low percentages — 7.4, 4.6, 7.0 and 9.3 per cent

Fig 1 Classification of suture types: (1) normal bone; (2) wide and shallow suture; (3) spade-shaped bone; and (4) W-shaped bone.



Fig 1 (1)

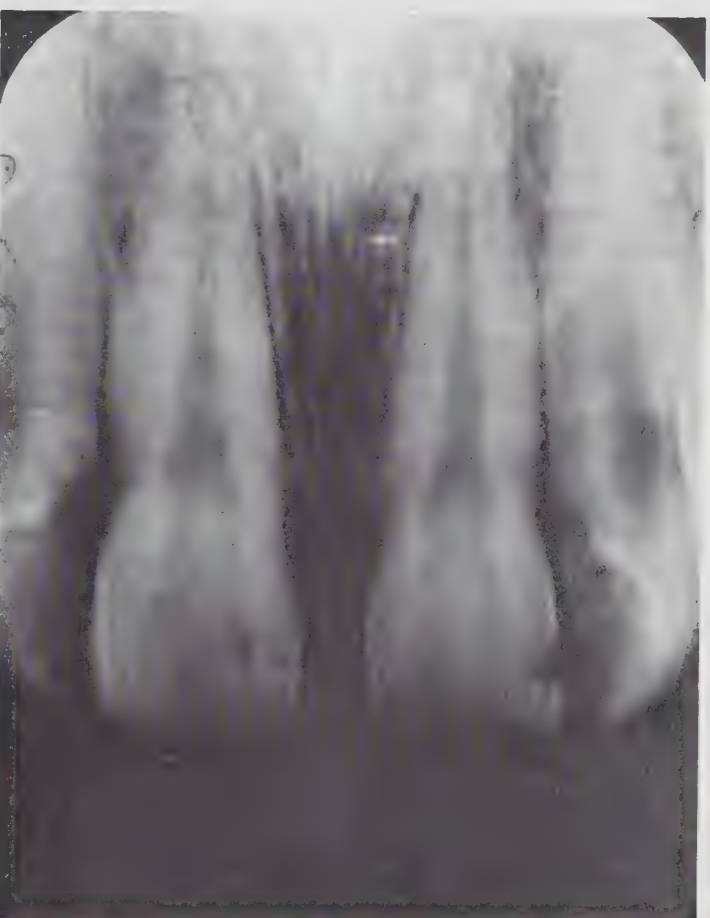


Fig 1 (2)

Fig 1 (3)



Fig 1 (4)



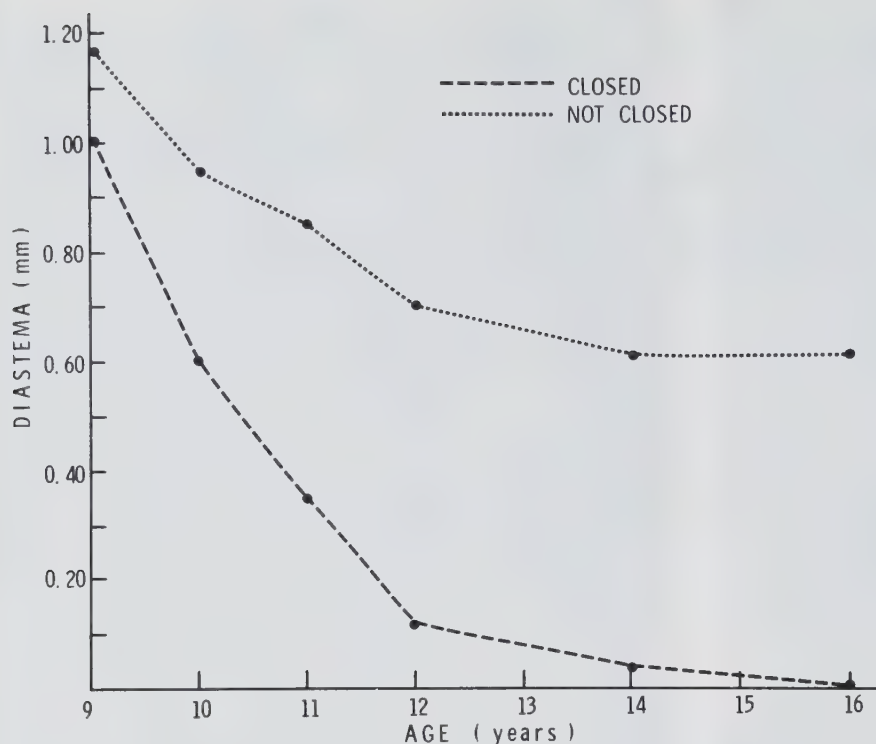


Fig 2 Rate of diastema closure from age 9 to 16 years in the closed and unclosed cases.

respectively, while 48.1 per cent of those with a space >0.5 mm at age 16 years had frenum type 5, and 60.0 per cent had frenum type 6 (12).

Data for the diastema group (230 children) show that suture types 3 and 4 occur in those children with persisting diastema, and these suture types (3 and 4) were not found in children with crowding. Only five of the 230 children had suture types 3 and 4; of these, five had a low frenum attachment (types 5 and 6); in none did the diastema close by 16 years of age because all exhibited generalized spacing.

Figure 2 shows that of the diastemas that closed, this closure took place primarily between the ages of 9 and 12 and was completed by 16 years. In those children in whom diastemas did not close completely by age 16, most of the closure that did occur was between 9 and 12 years.

Discussion

Low thick frenum attachment (type 6) occurs much more frequently with persistent diastema; 28 (66.6 per cent) of the 230 children had low attachments compared to 12 (7.5 per cent) whose space closed. This finding suggests that the frenum may actively maintain the space, but only in association with other factors which are present in children who have a space >0.5 mm at 16 years. We believe that the frenum persists as a low fleshy attachment because the lateral incisor exerts minimal or no mesial pressure on it.

Of the 230 children examined, frenectomies were known to have been performed in eight (two males and six females). The space in three of these closed completely by age 16, one had a diastema of less than 0.5 mm at age 16, and four had diastemas equal to or greater than 0.5 mm at age 16. All the diastemas that did not close were associated

with factors, other than the frenum, which we believe prevented natural closing, namely generalized spacing and overjet. Generalized spacing appears to be the primary cause and the related low, thick frenum and suture type make only a minor contribution. The finding that spacing is associated with 50 per cent or more of the persistent diastemas suggests that each child should have thorough space analysis and this, coupled with careful inquiry concerning heredity, should enable the clinician to select those children where the diastema can be expected to close spontaneously. Thus he can concentrate on those children who have diastemas that are most likely to persist. Frenectomy is only necessary in a very few cases, and even then it should be done after the central incisors have been approximated and held together, otherwise scar tissue may develop and continue to hold the incisors apart.

These data, which correlate suture, frenum and degree of spacing and crowding, show that crowding is never associated with suture types 3 and 4 because all 29 instances of crowding had suture types 1 and 2. Low frenum types 5 and 6 were associated with persistent diastema in more than one-half of this sample. However, among the children with frenum types 5 and 6 were those with suture types 2, 3 and 4, and all but two of those with low frenum types 5 and 6 had abnormal spacing. All children with frenum types 5 and 6 who had diastemas that closed by age 16 years had either suture type 1 or 2.

The combination of spacing, low frenum attachment types 5 and 6 and suture types 2, 3 and 4, appears to be associated with persistence of diastema. Suture type 3 appears to be a suture type 1 that had no mesial pressure during the development of the dentition; this allowed a table of bone to persist in the midline. Suture type 4 appears to represent a deeper extension of type 2, and these types (2

and 4) appear to have a structure considerably different from types 1 and 3. Spacing seems to be the major determining factor.

Low frenum (type 5 and 6) and spacing seem to appear together; the spacing encourages the low, wide frenum and also the development of suture types 2, 3 and 4. Heredity probably plays the major role in determining tooth and jaw size and the presence or absence of teeth, while environment contributes to the development of severe overjet, which is just another form of spacing.

Conclusion

Most practitioners recognize that persistence of a maxillary diastema is due to numerous etiologic factors such as normal development, habits, missing or undersized upper incisors, supernumerary teeth, deep overbite and midline pathology.

A frenum should not be called abnormal unless these factors have been excluded. This exclusion requires the clinician to make a thorough analysis of all possibilities and to assess all the factors which might contribute to the diastema. In the vast majority of cases he will conclude that the frenum is involved only secondarily.

Before he initiates treatment of a maxillary diastema, the dentist should work through the following procedures:

1. Record a good family history and review the patient's history.
2. Assess the dental development or maturation — chronological age is not an accurate indication of biological age. If the diastema is not closed by the dental age of 12 years, it will unlikely close through normal development.
3. Take dental radiographs to exclude midline pathology or congenital absence of teeth.
4. Measure tooth dental arch proportions — Bolton discrepancy; for example, peg-shaped lateral incisors where crowns may be required to close space.
5. Determine suture type, noting that suture types 3 and 4 are usually associated with low frenum attachment and generalized spacing which requires more extensive treatment.
6. If the frenum is abnormal, it should be removed after the upper anterior teeth have been apposed and maintained in place for several months. If a new space is left distal to lateral incisors, it will probably be necessary to close the space completely with crowns or bridges.

This study was made possible by use of material from the Burlington Growth Centre, Faculty of Dentistry, University of Toronto, which was supported by funds provided by Grant 606-1349-40 under the National Health Grants Program (Canada). The authors would like to thank J. O. Godden, M.D. for his assistance in the preparation of this manuscript.

Dr. Popovich is professor of orthodontics and director of the Burlington Growth Centre, Faculty of Dentistry, University of Toronto.

Dr. Thompson is associate dean and associate professor of dentistry, Faculty of Dentistry, University of Toronto.

Dr. Main is a general dental practitioner with the Borough of North York.

- 1 Tait, C. H. The median frenum of the upper lip and its influence on the spacing of the upper central incisor teeth. *Dent Cosmos* 76:991, 1934.
- 2 Taylor, J. E. Clinical observations relating to the normal and abnormal frenum labii superioris. *Amer J Orthodont* 25:646, 1939.
- 3 Burlington Orthodontic Research Centre. Progress Rep 3, 1957.
- 4 Backlund, E. Diastema mediale superioris, frekvens och etiologi (a longitudinal study of 300 9-12 years old). *Svensk Tidlak* T 57:273, 1964.
- 5 Gardiner, J. H. A survey of malocclusion and some aetiological factors in 1000 Sheffield schoolchildren. *Dent Pract* 6:187, 1956.
- 6 Idem. Midline spaces. *Dent Pract* 17:287, 1967.
- 7 Jakobsson, S. O. Central diastema in upper jaw. *Dent Abst (Chicago)* 8:208, 1963.
- 8 James, G. A. Clinical implications of a follow-up study after frenectomy. *Dent Pract* 17:299, 1967.
- 9 Weyman, J. The incidence of medial diastemata during the eruption of the permanent teeth. *Dent Pract* 17:276, 1967.
- 10 Sanin, C., Sekiguchi, T. and Savara, B. S. A clinical method for the prediction of the closure of the central diastema. *J Dent Child* 36:41, 1969.
- 11 Popovich, F. and Thompson, G. W. Etiologic factors associated with persistence of maxillary diastema. In press.
- 12 Popovich, F., Thompson, G. W. and Main, P. A. The maxillary interincisal diastema and its relationship to the superior labial frenum and intermaxillary suture. In press.



CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE.

Direct advertising copy to:
Marie Cosgrave, Classified Advertising Manager,
Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6.
Telephone: (613) 523-1770.

CLASSIFIED ADVERTISING RATES (Per Insertion Per Issue):

Minimum (50 words or less)	\$15.00
Each additional word	.30
Service charge for C.D.A. Box No.	2.00

DISPLAY CLASSIFIED ADVERTISING RATES: Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

OFFICES AND PRACTICES

BRITISH COLUMBIA — Abbotsford. Dental office for rent in modern professional building in Abbotsford, adjacent to hospital. Panoramic view. Apply: McCallum Terrace Holdings, 2151 McCallum Rd., Abbotsford, B.C. V2S 3N8.

BRITISH COLUMBIA — Queen Charlotte City. Solo practice or Associate-ship on Queen Charlotte Islands. Work volume limited only by the practitioner. A country with ample fish and game for the sportsman. The last frontier for the individualist. Write: Dr. D. H. Nomura, D.D.S., P.O. Box 68, Queen Charlotte City, B.C.

BRITISH COLUMBIA — Richmond (Vancouver Area). New, modern, well equipped dental office space of 2,150 sq. ft., suitable for two or three dentists with one or two hygienists. Four fully equipped operatories, total space for seven. Panorax with Cephalo head, G.E. x-ray machines, automatic developer, lab, private office and staff room. All on lease for five years. No capital outlay required. Dentist leaving for postgraduate study. Reply to CDA Box Number 1710.

BRITISH COLUMBIA — Southern Interior. For sale or lease immediately: Current five year practice; three operatories fully equipped; high income/low overhead; modern air-conditioned building. Very reasonable arrangements; excellent skiing and fishing. Please reply to CDA Box Number 1698.

BRITISH COLUMBIA — Sunshine Coast. Practice for sale; extremely busy on part-time basis with excellent full-time potential. Please reply to CDA Box Number 1697.

BRITISH COLUMBIA — Victoria. For sale due to illness: 25 year established family practice in central city location. Three fully equipped operatories, darkroom, etc. Low overhead, Dental Lab and Supplier in building. For further information, contact: 2663 Bowker Ave., phone: (604) 592-9262.

ALBERTA — Calgary. For Sale: Calgary practice with high gross. Three fully equipped operatories with modern equipment. Space for fourth operatory. Reply to CDA Box Number 1662.

ALBERTA — Elk Point. Twenty-year-old "rural" practice for sale in small north-eastern Alberta town, 700 sq. ft. office with three operatories. Hospital privileges, high gross, low overhead. Excellent opportunity for immediate take over. Ideal outdoor recreation area with lakes and hunting. No cash outlay required. Reply to CDA Box Number 1692.

ONTARIO — Attractive West Hamilton location. Five bedroom executive home with many extras including attached four room office — centrally air-conditioned, newly renovated. Proximity to McMaster University, schools and shopping. Available immediately. Contact: Dr. N. Assad, (416) 525-8157.

ONTARIO — Caledon Hills Area. Busy, well established, modern general practice for sale. Two operatories. Hygienist. Located in a cosmopolitan, developing country area within easy reach of Toronto night-life. Returning for post-graduate studies. Available immediately. Very reasonable terms. Low cash outlay. Phone: Dr. C. P. Minett (519) 856-4903 (home), or write: RR #2, Guelph, Ont. N1H 6H8.

ONTARIO — Cannington. Golden opportunity awaits any dentist setting up practice in Cannington, 70 miles north-east of Toronto. Rapidly developing small town of 1,500. Local hospital privileges. New medical centre with spacious fully serviced dental suite. Present part-time dentist leaving to concentrate on his city practice but might sell some equipment. Reply to: Box 370, Cannington, Ont. L0E 1E0. Phone: (705) 432-2569.

ONTARIO — Kincardine. Busy general practice for sale. One room equipped, two others ready for equipment, about 1,000 sq. ft. Price includes building with two bedroom apartment. Equipment is on lease. Growing community on Lake Huron. Please apply to: Box 68, Kincardine, Ont.

ONTARIO — London Area. Sacrifice — health reasons. New six-year practice available immediately. Exceptional opportunity. for graduate or dentist seeking relocation. Phone: (519) 527-1530 (collect).

ONTARIO — Ottawa. Beautiful new building, ideal for dental practice. Location: 305 Presland Ave., Ottawa. High residential area. Private parking. Apply within, or phone (613) 745-8359.

ONTARIO — Ottawa. Established professional buildings located in south central commercial-residential district on public transport routes, close to medical and hospital facilities. All building services provided. One existing dental office includes partitioning, plumbing, lab, and washroom. Available immediately. Professional management by Riverside Terrace (Ottawa) Ltd. Leasing enquiries, phone: (613) 232-7361.

ONTARIO — Ottawa. Family practice established 10 years. Present dentist wishes to relocate in Western Canada. Small well located office with or without equipment. Flexible and reasonable. Reply to CDA Box Number 1711.

ONTARIO — Tilburg. Dentist required to take over very busy town practice, established five years in custom built office, located 30 miles from Windsor, Ontario. Full book provided. Only purchase necessary is for dental equipment and supplies. Owner relocating in west. Phone: (519) 682-0766. Evenings.

ONTARIO — Toronto. Yonge-Davisville Medical Dental Building. Professional suite for rent, 735 sq. ft., available October 1, 1977. Suitable for dental or medical practice. Plumbing and wiring included in two dental operatories. Phone: (416) 489-5454 or (416) 486-8526.

ONTARIO — Town of Smooth Rock Falls. Dentist required. 700-800 sq. ft. rent-free dental building available, including plumbing and wiring for two operatories, lab, darkroom, waiting room and private office. Town population 3,000 — no dentist within a 35 mile radius. Underserved area with guarantee. For full details write to: Town Clerk, Smooth Rock Falls, or phone: (705) 338-4355.

QUEBEC — Montreal. Four year established general practice in the west-end area. Four operatories, two fully equipped. Excellent opportunity for one or two prevention-oriented dentists. One thousand square feet, commercial laboratory next door. Yearly gross income near one hundred thousand dollars. Owner specializing. Please reply to CDA Box Number 1709.

OPPORTUNITIES AVAILABLE

PHYSICIAN'S PLACEMENT CENTRE. Dentists are invited to use our matching services. We do have several requests for qualified dentists in various parts of Canada. Write to: Physician Placement Centre Ltd., Lafleche, Saskatchewan S0H 2K0. Phone: (306) 472-3104.

BRITISH COLUMBIA — Vancouver (Burnaby). Hygienist required for a group practice in Burnaby (near Vancouver). Modern office and excellent working conditions. Interest and enthusiasm in Prevention programme is important. Salary according to experience and qualifications. Please reply: Dr. Remocker, 4587 East Hastings St., Burnaby, B.C., or call: (604) 291-6696.

ALBERTA — Hardisty. Dentist required in expanding Alberta rural community that has tremendous potential, is situated at the southern tip of oil corridor. Exceptional sports facilities and excellent hunting area. Contact: Hardisty and District Chamber of Commerce, Hardisty, Alta.

ALBERTA — Rocky Mountain House. Small town warmth and friendliness available for an intra-oral dental assistant in an extremely modern and friendly three operator, one dentist practice in Rocky Mountain House (population 5,000). Job commences in July. Phone: (403) 845-3111 days, (403) 845-2668 evenings, or write: Box 189, Rocky Mountain House, Alta. T0M 1T0.

SASKATCHEWAN — Province of Saskatchewan. Supervising Dentist: The Department of Northern Saskatchewan's Children's Dental Program requires a dentist for Buffalo Narrows, situated in the northwest part of the province. The program, which includes treatment, prevention and education, is primarily aimed toward raising the dental health standard of northern children, ages three to sixteen. The program is a team approach utilizing dentists, dental nurses and dental assistants. The successful candidate will be responsible for examination, diagnosis, treatment planning, supervision of the dental nurse/dental assistant teams and for treatment procedures beyond the scope of the dental nurse. The position requires frequent travel by bush plane and car through forested lake regions to five communities within a 100 mile radius of Buffalo Narrows. Applicants will have university graduation from an accredited school of dentistry and be eligible for licensure with the College of Dental Surgeons of Saskatchewan. In addition, s/he should have: special interest in public health dentistry and community development, genuine interest in children, sensitivity toward cross-cultural differences and capability for administrative duties. Salary: \$27,372-\$34,092 (Dentist); \$29,868-\$37,236 (With specialization). Competition Number: 613020-7-684. Closing date: As soon as possible. Forward application forms and/or resumes to the Public Service Commission, 1820 Albert St., Regina, Sask. S4P 2S8, quoting position, department, and competition number.

ONTARIO — Dental Underserved Areas. The Ontario Ministry of Health offers financial support for dentists to establish practices in designated underserved dental areas. Locations are available throughout Ontario. Incentive grants, payable over four years, are \$18,000 in Northern Ontario and \$14,000 in Southern Ontario. Alternatively, a guaranteed net professional income of \$28,000 per annum is offered in Northern Ontario. A limited number of salaried positions are open on mobile dental coaches. Apply to: Dental Officer, Program for Underserved Areas, 7 Overlea Blvd., Toronto M4H 1A9. Phone: (416) 965-5036.

ONTARIO — Windsor. Hygienist wanted for preventive dental practice. We are offering good hours, high salary and relaxed working conditions. Phone: John Thomson any time: (519) 948-4119 or (519) 735-2263, or write: 2655 Lauzon Rd., Windsor, Ont. N8T 2Z5.

QUEBEC — Montreal. Faculty of Dentistry, McGill University: Applications are invited for a full-time position in the Department of Orthodontics to co-ordinate activities within a "facial pain" grouping. Applicant must be a graduate of an accredited orthodontics program and should have broad clinical and academic background in occlusion, along with research experience and interest. Applicants must be eligible for licensure by the Order of Dentists of Quebec, and be prepared to fulfill French language requirements. Academic rank and salary commensurate with qualifications. Candidate must be available for September 1, 1977. Please send curriculum vitae and reference to: The Dean's Office, Faculty of Dentistry, McGill University, 3640 University St., Montreal, P.Q. H3A 2B2.

QUEBEC — Montreal. Bilingual Dental Assistant: An Insurance Company located in Montreal requires a Dental Assistant to assess and process claims under Group Dental Insurance Plans. Four to five years of experience required, excellent benefits, salary commensurate with qualifications. Send resume to: A. Chartrain, P.O. Box 6075 (A), Montreal, P.Q. H3C 3G5.

NOVA SCOTIA — Halifax. Department of Anatomy, Dalhousie University. Associate or Associate Professors: Applications are invited from persons with Ph.D. and/or M.D. or D.D.S. qualifications for two positions, one commencing September 1, 1977 and one on July 1, 1978. Duties may include the teaching of Anatomy to Medical, Dental or Health Professional students. Experience in teaching Gross Anatomy and an established research program are required. Salary and rank commensurate with qualifications and experience. Applications, together with curriculum vitae and the names of two referees should be addressed to: Dr. D. G. Gwyn, Head, Department of Anatomy, Dalhousie University, Halifax, N.S. B3H 4H7.

Career Opportunities



DENTIST

Health Department

An excellent opportunity for a community-oriented dentist desiring to practice dentistry without the pressure of overhead expenses. All patients are 4 to 19 years of age.

Apply to:



Dr. A. Lizaire, Dental Health Officer
Edmonton Local Board of Health
7th Floor, C. N. Tower
Edmonton, Alberta
(403) 425-6084

CITY COMMISSIONERS

The Province of British Columbia

DENTAL HYGIENISTS:

The Community Health Programs, Ministry of Health, offers excellent opportunities for career-minded Hygienists to participate in community educational, motivational, and preventive pre-school and school dental programs in specific geographical areas.

Qualifications: University diploma in Dental Hygiene, or equivalent; registration and licence graduation. Successful candidates must become registered in British Columbia. Willing to drive own car on mileage.

Salary: \$1,222-\$1,399 per month, plus uniform allowance. Fringe benefits include medical, dental and group life coverage.

Quote Competition No. 77:1070

Closing Location: VICTORIA
Closing Date: IMMEDIATELY

Positions are open to both men and women. Canadian citizens are given preference. Obtain and return applications at address below, unless otherwise indicated.



Province of British Columbia
Public Service Commission

544 Michigan Street, Victoria, B.C. V8V 1S3

ASSOCIATESHIP AVAILABLE

BRITISH COLUMBIA — Revelstoke. Associate required for unique community oriented dental practice. Ideal situation for new or recent graduate. Serving 10,000 in the heart of the mountains. Financial arrangements negotiable. N.D.E.B. licensing requirement. Contact: Dr. Reuben B. Tataryn, R.D.H.S., Dental Health Services, P.O. Box 174, Revelstoke, B.C.

BRITISH COLUMBIA — Southern Interior. A very busy clinic is losing a dentist. Practice already established. Immediate full patient load. This is the chance of a lifetime in a most beautiful area. Please call: Dr. D. Fietz collect: (604) 378-2721.

BRITISH COLUMBIA — Vancouver. Associate required for Vancouver area to replace dentist on vacation from November 1, 1977, until April 30, 1978. Modern group practice enjoying all aspects of preventive dentistry. Experience required. House also available for rent if desired. Please contact: Dr. G. B. Remocker, 4587 E. Hastings St., N. Burnaby, B.C., V5C 2K3.

BRITISH COLUMBIA — Vancouver Island. Nanaimo dentist requires associate on expense sharing basis, in downtown office. There are, the equivalent of one-and-a-half rooms, but lots of work. Available beginning of July, 1977. Write to: Dr. L. Lewis, 170 Wallace St., Nanaimo, B.C., or phone: (604) 753-4711.

BRITISH COLUMBIA — Victoria. Young, associate dentist required. Four-chair modern operatories. Strictly medical-dental building (opposite Jubilee General Hospital). General anaesthesia privileges. Family-oriented practice. No capital outlay. Apply: Dr. B. Rauch, #310 - 1900 Richmond Ave., Victoria, B.C. V8R 4R2.

ALBERTA — Calgary. Full-time associate required in a busy Calgary family practice. No initial investment necessary. Chance to participate fully in building and practice if compatible. Contact: Dr. N. A. Mitenko, P.O. Box 7367, Station "E", Calgary, Alta., or phone: (403) 242-5777 before 3:00 p.m.

ALBERTA — Fort McMurray. Associate(s) needed for new 3,400 sq. ft. clinic. Three hygienists. Instant full practice, heavily overbooked. Population 20,000 and growing, only two dentists, six figure grosses. Offer: 60%. Phone: 743-3570 (Clinic); Dr. J. Clark, 743-5486 (Residence); Dr. L. Lines, 743-8871 (Residence).

SASKATCHEWAN — Saskatoon. Full-time associate required in a busy high gross family practice. Two fully modern operatories available to associate in five-chair office. Possibility of purchase or partnership. Modern air-conditioned Medical-Dental Building. Contact: Dr. R. E. Dickson, 621 Medical Arts Building, Saskatoon, Sask. S7K 3H3, or phone: 653-3173 (home).

MANITOBA — Thompson. Young Associate or partner required for ultra-modern five operator clinic practising all phases of general dentistry especially crown and bridge, with full assist staff. High insurance area that is rapidly expanding. Contact: Dr. P. Sheehan, Westwood Clinic, Thompson, Manitoba. Phone: (204) 677-4526.

ONTARIO — Eastern Ontario City. Progressive group requires associate for a full-time general practice, in pleasant surroundings. Reply to CDA Box Number 1707.

NOVA SCOTIA — Dartmouth/Halifax. Full time associateship available. Contact: Dr. P. C. M. Fung, 99 Main St., Dartmouth, N.S. B2X 1R4. Phone: (902) 434-5217 or (902) 434-9095.

EDUCATIONAL COURSES

CALIFORNIA — Los Angeles. The University of Southern California School of Dentistry is accepting applications for a three-year certificate program in Oral Pathology to begin July 1978. Thirty months will consist of rotation through the various services of Los Angeles County/University of Southern California Medical Center concerned with anatomic and clinical pathology, and six months will be devoted to training in the Pathology Department of the School of Dentistry. The trainee will receive a stipend for each year of the entire three-year program. The residency program will satisfy formal educational requirements for examination and certification by the American Board of Oral Pathology. For additional information and applications, contact: The University of Southern California School of Dentistry, Office of Admissions, 925 West 34th Street, Los Angeles, CA. 90007, U.S.A.

CALIFORNIA — Los Angeles. Advanced Programs: Applications may be obtained for advanced training in Endodontics, Orthodontics, Pedodontics, Periodontics, Prosthodontics, Oral Pathology and Oral Surgery. All programs are ADA accredited and are of 24-month duration with the exception of Oral Surgery and Oral Pathology and prepares the student for examination by the American Board. Each program commences July 1. The Hospital residency programs are available in advanced Pedodontics and Oral Pathology which provide monthly stipends. For additional information, contact: University of Southern California, School of Dentistry, Office of Admissions, 925 West 34th St., Los Angeles, CA. 90007, U.S.A.

EQUIPMENT

ONTARIO — Guelph. For sale: Ritter Century unit model J, blue; Ritter Motor Chair, model E, blue; two Ritter Lights, silver, one with floor light mounting post; one Midwest Tru Torque, new, used only once. Phone: (519) 822-7340, Monday to Thursday; (519) 824-8822 evenings, or contact: 319 Speedvale Ave. E., Guelph, Ont. N1E 1N4.

MISCELLANEOUS

DENTAL TEXTS available on most subjects, \$15.00 per book for sale. Please state subject preferred and list will be sent to you. Also, 1957 onward year-books available. Reply to CDA Box Number 1712.

HOME EXCHANGE SERVICE FOR PROFESSIONALS. Vacation costs can be considerably reduced if you utilize our home exchange for professionals only. Our service is limited to health practitioners, lawyers, and CPA's with national and international listings. Request a home; there is no fee until we locate a home in the location of your choice. Professional Courtesy, 601 Beachview Dr., St. Simons Island, GA 31522, U.S.A.

Acupuncture Foundation of Canada Examination in Acupuncture

The Acupuncture Foundation of Canada announces its first Examination in Acupuncture for Physicians and Dentists to be held

October 3, 1977, in Toronto.

Chief Examiner: Joseph Wong, M.D., F.R.C.P.(C)

Eligibility: Licenced Physicians and Dentists with 100 hours of approved training.

Fee: Members of the A.F.C. \$200.00

Non-Members \$250.00

To be paid on, or before, September 1, 1977

For information send inquiry to: **Joan Adams, Acupuncture Foundation of Canada, 10 St. Mary Street, #503, Toronto, Ontario, M4Y 1P9. Phone: (416) 931-4131**

PROSTHODONTICS:

University of Manitoba, Faculty of Dentistry has available, a full-time appointment in Complete and Removable Partial Prosthodontics. The position requires teaching expertise in laboratory and clinical components and active participation in research. Candidates with graduate education preferred. Salary commensurate with qualifications and experience. Applicants to write to Dr. P. M. Jackin, Head, Department of Rehabilitative Dental Science, Faculty of Dentistry, 780 Bannatyne Ave., Winnipeg, Man. R3E 0W3.



Open to both
men and women
Appel
de candidatures
mixtes



Public Service
Canada
Fonction publique
Canada

Health and Welfare Canada
Medical Services — Northwest Territories Region
Inuvik and Frobisher Bay, N.W.T.

DENTAL OFFICERS

Salary: \$24,482 — \$30,941 (Under Review)
(Plus Isolated Post Allowance)
Competition Number: 76-E-880

Duties

Opportunities exist for dentists to travel in northern Canada and to practise all phases of dentistry with modern portable equipment in the western Arctic (Inuvik Zone) and the eastern Arctic (Baffin Zone). Responsibilities include the supervision of dental therapists in settlements throughout the Zone.

Qualifications

A current licence to practise dentistry in a province of Canada and knowledge of the English language are essential. A keen interest in northern dentistry is required.

Other Information

Inuvik, with a population of 3500, is located on the treeline 1200 air miles northwest of Edmonton. Frobisher Bay, with a population of 2500 is located on the southern tip of Baffin Island 1300 air miles due north of Montreal. For more information, call Mr. D.W. Laurie at (403) 425-5698 in Edmonton.

How to Apply

Forward completed "Application for Employment" (Form PSC 367-4110) available at Post Offices, Canada Manpower Centres or offices of the Public Service Commission of Canada, to:

Public Service Commission of Canada
300 Confederation Building
10355 — Jasper Avenue
Edmonton, Alberta T5J 1Y6

Please quote the applicable reference number at all times.

Santé nationale et Bien-être social
Services médicaux — Territoires du Nord-Ouest
Inuvik et Frobisher Bay (T.N.-O.)

DENTISTES

Traitement : \$24 482 — \$30 941 (en voie de révision)
(Plus une prime d'isolement)
Numéro du concours : 76-E-880

Fonctions

Il existe dans l'ouest de l'Arctique (zone d'Inuvik) et dans l'est de l'Arctique (zone de Baffin) des occasions pour les dentistes de voyager dans le nord du Canada et d'exercer leur profession sous tous les rapports (avec matériel portatif moderne). Les fonctions comprennent également la surveillance d'assistants dentaires travaillant dans de petites agglomérations de la zone en question.

Conditions de candidature

Être titulaire d'un permis en règle permettant d'exercer la profession de dentiste dans une province du Canada. La connaissance de l'anglais est indispensable. Être vivement intéressé à exercer sa profession dans le nord du Canada.

Renseignements complémentaires

Inuvik, située à la limite de la végétation arborescente, compte 3 500 habitants et se trouve à 1 200 milles aériens au nord-ouest d'Edmonton. Frobisher Bay, située à l'extrémité méridionale de l'île de Baffin, compte 2 500 habitants et est à 1 300 milles aériens au nord de Montréal. Pour de plus amples détails, appelez M. D. W. Laurie au (403) 425-5698, à Edmonton.

Comment se porter candidat

Remplir le formulaire de demande d'emploi C.F.P. 367-4110, — on le trouve dans les bureaux de poste, les centres fédéraux de main-d'œuvre, et les bureaux de la Commission de la fonction publique du Canada, — et le faire parvenir à :

Commission de la fonction publique du Canada
300 Édifice de la Confédération
10 355, avenue Jasper
Edmonton (Alberta) T5J 1Y6

Prière de toujours rappeler le numéro de référence approprié.

DENTAL AND MEDICAL OFFICES FOR RENT

Pointe Claire, West Island (Montreal)

Best location with large clientele.
Modern air conditioned offices, all
plumbing and dental facilities in-
stalled. Suitable 1 or 2 dentists, group
practice or orthodontist.

Information: **(514) 484-8477**



ADVERTISERS' INDEX

The L. D. Caulk Co. of Canada	317,318
Colgate Palmolive Ltd.	313
Denco	305
Dentsply International	302,309
Charles E. Frosst	IFC
Lever Brothers	307
Weil Dental	315
Warner Lambert Canada Ltd.	OBC
Astra Pharmaceuticals	IBC

Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.

IMPACT, RESPONSE, RESULTS when you advertise in The Journal of The Canadian Dental Association

PRIME EXPOSURE FOR
YOUR ADVERTISING

HIGHEST CIRCULATION
FIGURES IN CANADA

UNIQUE, WELL-PLANNED
EDITORIAL PROGRAM

EVERY ISSUE BILINGUAL

TOP QUALITY REPRODUCTION

COMPETITIVE RATES



Contact Business Manager:
JOURNAL OF THE CANADIAN
DENTAL ASSOCIATION
1815 Alta Vista Drive, Ottawa
Ontario K1G 3Y6
Telephone: (613) 523-1770

REGISTRATION FORM

65 TH ANNUAL WORLD DENTAL CONGRESS FEDERATION DENTAIRE INTERNATIONALE



TORONTO CANADA

22-28
OCTOBER
1977

For advance registration return one copy with appropriate fees before
September 14, 1977; otherwise register at Congress.

Return to: 1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario, M5W 1X3
CANADA.

PLEASE TYPE OR USE BLOCK LETTERS; WHERE APPLICABLE CIRCLE APPROPRIATE RESPONSE

SURNAME: DENTAL LIBRARY INITIALS: _____ Prof./Dr./Mr./Mrs./Miss _____

ADDRESS: 124 EDWARD ST.,
TORONTO 2

COUNTRY: _____ Language for documents: English / French / German / Spanish

FDI MEMBERSHIP:

Are you a supporting member of the FDI YES/NO

MEMBERSHIP REGISTRATIONS

F.D.I. Supporting Member — \$100 before or \$120 after July 1 —————→ \$ _____

Canadian Dental Association (Non FDI) Member \$115 before or \$130 after July 1 —————→ \$ _____

ADDITIONAL REGISTRATIONS (\$10 each: no fee for spouse or other family member)

REGISTRANT: _____ SURNAME: _____ INITIALS: _____

Spouse: _____

Family member: _____

Auxiliary: _____

Student: _____

MILITARY PERSONNEL ONLY

Rank: _____

Attending Military Conference and Field Visit to Base Borden — on Thurs., October 20 YES/NO accompanied YES/NO

SOCIAL PROGRAM

Congress Ball — Tues., October 25. (\$30. per person; limited attendance) —————→ \$ _____

Canadian Hoedown — Fun Night — Wed., October 26. (\$15. per person) —————→ \$ _____

LADIES PROGRAM

Fashion Show and Luncheon — Mon., October 24. (\$12.50 per person) —————→ \$ _____

Sightseeing Tours — English Commentary

Toronto City — mornings — specify day. Mon./Tues./Wed./Thurs.

(\$6 per person) —————→ \$ _____

Toronto City and Harbour (bus and boat) — mornings — specify day. Mon./Tues./Wed./Thurs.

(\$7 per person) —————→ \$ _____

Niagara Falls — all day — specify day. Mon./Tues./Wed./Thurs.

(\$22 per person including lunch) —————→ \$ _____

McMichael Canadian Art Gallery — 5 hours. Tues., October 25

(\$12 per person including lunch) —————→ \$ _____

Antique — all day. Thurs., October 27

(\$19 per person including lunch) —————→ \$ _____

TOTAL FEES (CANADIAN \$ ONLY) —————→ \$ _____

MAKE CHEQUES OR MONEY ORDERS PAYABLE TO FDI/CDA WORLD DENTAL CONGRESS

CANCELLATION CLAUSE

Ten per cent will be deducted from registration fees of registrants cancelling up to two months before the Congress and 20 per cent from those cancelling up to one month before the meeting. Money paid for social events by those not attending the meeting will be repaid in full. Money will not be refunded for tickets which cannot be resold during the Congress.

PRE AND POST CONGRESS TOURS

If you are interested in detailed information concerning Pre and Post Convention tours, please check here ☐

SIGNATURE _____ DATE _____

**65ème CONGRES
DENTAIRE MONDIAL ANNUEL
FEDERATION
DENTAIRE INTERNATIONALE**



**TORONTO
CANADA**

du 22 au 28
OCTOBRE
1977

Pour s'inscrire à l'avance, veuillez renvoyer un exemplaire avec le montant exact des droits au plus tard le 14 septembre 1977; après cette date, il faut s'inscrire pendant le Congrès.

Renvoyer à: 1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A,
Toronto, Ontario, M5W 1X3
CANADA.

VEUILLEZ DACTYLOGRAPHIER OU UTILISER DES LETTRES MAJUSCULES; SI NECESSAIRE VEUILLEZ ENTOURER LA REPONSE CORRECTE.

NOM DENTAL LIBRARY INITIALES _____ Prof./Dr./M./Mme/Melle _____
ADRESSE 124 EDWARD ST.
TORONTO 2

PAYS _____ Langue pour les documents: Allemand / Anglais / Français / Espagnol

MEMBRE DE LA FDI:

Etes-vous membre sympathisant de la FDI OUI/NON

INSCRIPTIONS DES MEMBRES

Membre sympathisant de la FDI — \$100 avant le 1er juillet et \$120 après _____ \$ _____
Membre de l'Association Dentaire canadienne (non FDI) \$115 avant le 1er juillet ou \$130 après _____ \$ _____

INSCRIPTIONS SUPPLEMENTAIRES (\$10 chacune: gratuit pour les époux (ses) autres membres de la famille)

PARTICIPANT	NOM:	INITIALES	DROITS
Epoux(se):	_____	_____	_____
Membre de la famille:	_____	_____	_____
Auxiliaire:	_____	_____	\$ _____
Etudiant:	_____	_____	\$ _____

PERSONNEL MILITAIRE UNIQUEMENT

Grade: _____

Assistera à la Conférence Militaire et la visite à la Base Borden — le jeudi 20 octobre OUI/NON accompagné OUI/NON

PROGRAMMES DES FESTIVITES

Bal du Congrès — Mardi 25 octobre. (\$30 par personne; participation limitée) _____ \$ _____
Canadian Hoedown — "Nuit de rigolades" — Mercredi 26 octobre (\$15 par personne) _____ \$ _____

PROGRAMME DES DAMES

Défilé de modes et déjeuner — Lundi 24 octobre (\$12.50 par personne) _____ \$ _____
Visites guidées — commentaires en anglais
Cité de Toronto — matinées — préciser le jour. lun./mar./mer./jeudi
(\$6 par personne) _____ \$ _____
Cité et port de Toronto (autobus et bateau) — matinées — préciser le jour. lun./mar./mer./jeudi
(\$7 par personne) _____ \$ _____
Chutes du Niagara — toute la journée — préciser le jour lun./mar./mer./jeudi
(\$22 par personne, déjeuner compris) _____ \$ _____
Galleries d'art canadien McMichael — 5 heures. mardi 25 octobre
(\$12 par personne, déjeuner compris) _____ \$ _____
Antiquités — toute la journée jeudi 27 octobre
(\$19 par personne, déjeuner compris) _____ \$ _____

**MONTANT TOTAL (\$ CANADIENS
UNIQUEMENT)** _____ \$ _____

ADRESSER LES CHEQUES OU LES MANDATS DE PAIEMENT A L'ORDRE DE FDI/CDA WORLD DENTAL CONGRESS

CLAUSE D'ANNULATION

On déduira dix pour cent des droits d'inscription des participants qui annuleront deux mois, au moins, avant le Congrès et 20 pour cent des droits d'inscription pour ceux qui annuleront un mois, au moins, avant la session. On remboursera à ceux qui n'auront pas assisté au Congrès la totalité des sommes versées pour le programme des festivités. On ne remboursera pas toutefois le prix des billets qui n'auraient pu être revendus pendant le Congrès.

VISITES ANTERIEURES ET POSTERIEURES AU CONGRES

Si vous désirez recevoir des renseignements détaillés sur les visites antérieures et postérieures au Congrès, veuillez faire une marque ici ☐

SIGNATURE _____ DATE _____

HOTEL RESERVATION FORM

**65 TH ANNUAL
WORLD DENTAL CONGRESS
FEDERATION
DENTAIRE INTERNATIONALE**



**TORONTO
CANADA**

22-28
OCTOBER
1977

One copy to be returned with appropriate fees and the registration form before September 14, 1977 to:—

1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario M5W 1X3
Canada

For room reservations, please print or type three choices

Room will be occupied by: (please print or type)

1st _____

Name _____

2nd _____

Street **DENTAL LIBRARY** _____

3rd _____

City **124 EDWARD ST** State _____ Zip _____

TORONTO 2
Additional Occupants _____

Please enter my reservations at the above hotel for:

Singles **Twin/
Doubles** **1 Bdrm.** **Suites** **2 Bdrm.**

☐ @ \$ _____ ☐ @ \$ _____ ☐ @ \$ _____ ☐ @ \$ _____

Date Arriving _____ AM
PM _____ Departing

If rate requested is not available, the next highest will be assigned.

THE DEADLINE FOR MAKING ADVANCE RESERVATIONS IS SEPTEMBER 14, 1977.

Please **DO NOT** send your request directly to the HOTEL;
it **WILL ONLY DELAY** your confirmation. Please allow
two — three weeks to receive confirmation.

Hotel	Single	Double/Twin	1-Bed Suite	2-Bed Suite
1. Royal York (Hdqts.)	\$35	\$45	\$70 - \$135 (Studio suites \$60 - \$70)	
2. Sheraton Centre	\$33 \$38 \$43 (Cabanas \$59)	\$40 \$47 \$52	\$85 to \$153 (Hosp. Suites \$163 to \$203)	\$128 to \$196
3. Harbour Castle Hilton	\$35	\$42	\$70 - \$95	\$137
4. King Edward	\$20	\$24 \$26	\$38	\$70
5. Lord Simcoe	\$20	\$25		
6. Hotel Toronto	\$35	\$45	\$92 \$102	\$132 \$152 Add \$10 for double occupancy
7. Holiday Inn Toronto Downtown	\$30	\$39 \$42		
8. Bond Place	\$20	\$24		
9. Chelsea Inn	\$25	\$29		
10. Carlton Inn	\$17	\$21		
11. The Westbury	\$29.50	\$36.50		
12. Sutton Place	\$36.50	\$44.50		
13. Town Inn	\$29	\$34		
14. Park Plaza	\$34	\$38		
15. Hyatt Regency	\$38	\$45		
16. Hotel Plaza II	\$28	\$35		
17. Inn On The Park	\$38	\$46		
18. Prince	\$34	\$40		
19. Holiday Inn Don Valley	\$32	\$42		
20. Ramada Inn - Toronto	\$29.50	\$36.50		
21. Bristol Place	\$33.50	\$35.50		
22. Cara Inn	\$28	\$35		
23. Constellation	\$34	\$42		
24. Skyline	\$30	\$36		
25. Toronto Airport Hilton	\$29 - \$37	\$37 - \$45		

(Suites upon request \$75 - \$250)

Each of the above rates is quoted in Canadian Currency. Ontario sales tax — 7% not included.

WE STRONGLY URGE THAT YOU MAKE YOUR HOUSING RESERVATIONS EARLY, PARTICULARLY IF YOU PLAN TO ARRIVE ON SATURDAY. STATISTICS FROM THE TORONTO TOURIST INDUSTRY INDICATE A HEAVY INFLUX ON OCTOBER WEEKENDS.

(Please make all changes and cancellations in writing directly to the Organizing Committee).

Note: FDI business meetings and a portion of the scientific program will take place at the Royal York Hotel. The Dental Trade Show and other portions of the scientific program will take place at the Automotive Building, Exhibition Place.

Note: Les réunions administratives de la FDI et une partie du programme scientifique se dérouleront au Royal York Hotel. L'exposition de l'industrie dentaire et l'autre partie du programme scientifique se tiendront à l'Automotive Building, Exhibition Place.



If you think waiting for anesthesia onset is hard on you, think what it's like for him.

The more you had to ask "Feel anything?" the more convinced your patient got that he was going to.

So another piece of dentistry got off to a tense start.

For both of you.

And that's why Astra Canada developed Citanest Forte for routine

ASTRA

Mississauga, Ontario

dentistry. It's fast. It's effective. Yet doesn't take all morning to wear off.



Citanest Forte from Astra. In the handy Kleen Pak.

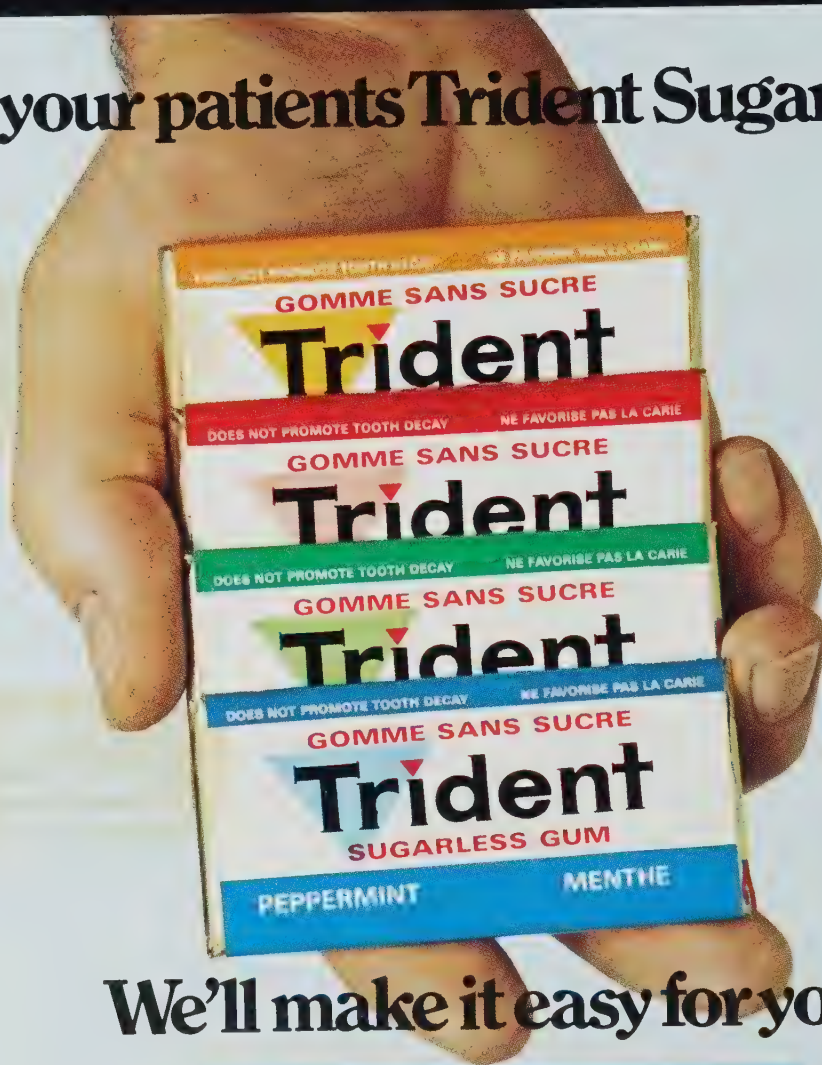
It's making dentistry a whole lot easier for patients.

And a whole lot easier for you.

Citanest[®] FORTE

Set a good example.

Give your patients Trident Sugarless Gum.



We'll make it easy for you.

Many dentists tell us that they're handing out Trident Sugarless Gum to their patients who chew gum. Trident is sugarless, so there's no risk of sugar damage to teeth.

Dentists recommend

Please send me the standard dentist's sample order, consisting of: 2 boxes of Spearmint, 2 boxes of Peppermint, 2 boxes of Fruit, and 2 boxes of Cinnamon—a total of 8 boxes (144 packages) for \$10.00. (Ontario dentists include 70¢ Provincial Sales Tax).

Enclosed please find my cheque ☐ money order ☐ in the amount of \$_____

Name DENTAL LIBRARY

Address 124 EDWARD ST.

City TORONTO 2 Zone 2 Prov. _____

Send to
Trident, Box 2147, Toronto, Ontario M5W 1G8

that patients use fluoride toothpastes, brush properly and have regular dental check-ups. Now you can set a good example for your patients who chew gum. Give them Trident Sugarless Gum.

DENTAL JOURNAL DENTAIRE

Si non livrable
au destinataire
**RETOURNER A
L'EXPEDITEUR**
Port payé

If Undeliverable
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed.

August/Août 1977/Volume 43/No 8

Canadian Dental Association/Association Dentaire Canadienne



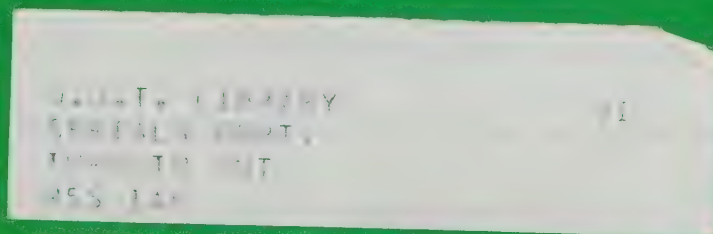
13 juin: Inauguration officielle du nouveau pavillon de l'Ecole de médecine dentaire de l'Université Laval
June 13: Official Opening of Laval University's School of Dentistry

In this issue:

The impacted third molar

Trigeminal neuropathy

An in vitro assessment of
oral prophylaxis procedures



SIEMENS

What do dentists tell dentists about their Siemens X-ray equipment?

One of the nicest things about making a discovery is the opportunity it provides for sharing your find with a colleague. Which is one reason you find so many Siemens owners talking about the unmatched versatility, precision, and long-term investment value of their Siemens X-ray equipment.

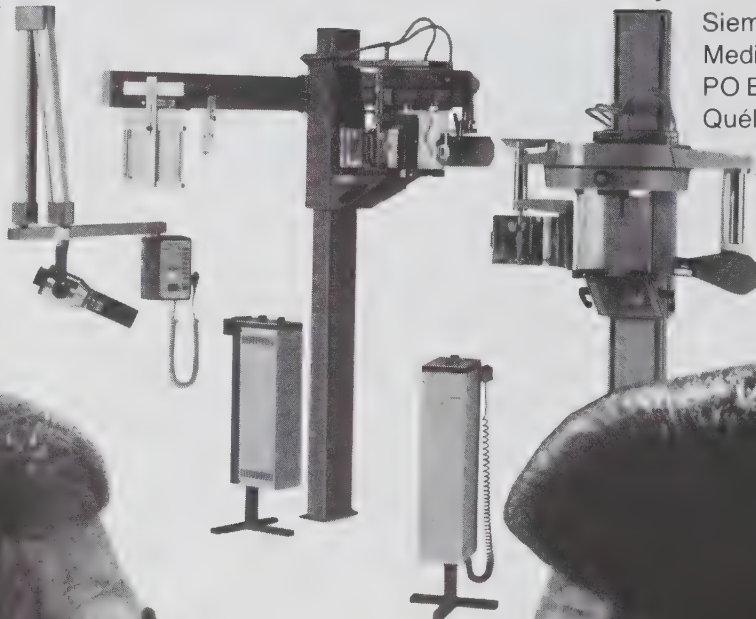
Orthopantomograph™ for example, performs more diagnostic procedures than competitive models. And it accommodates patients of any size – standing, seated or even in a wheel chair or prone on a stretcher – without special adaptations. For all their versatility, Orthopantomograph systems take up significantly less space

than comparable units. And they're easier to install.

The Orthoceph™ Panoramic Cephalometric unit offers lateral skull studies and panoramic films in one easy-to-use unit.

For complete information on the full range of Siemens products for dentists – including Heliodont intraoral X-ray units with automatic dosage control and easy-to-use film processors that handle film sizes up to 8" x 10" – see your full service dental dealer.

Siemens Electric Limited
Medical Systems
PO Box 7300, Pointe Claire
Québec H9R 4R6
Tel: (514) 695-7300
Telex: 05-822778



Prevention between visits



Brushing and flossing. Good diet. And CREST.

The at-home contribution to preventive dentistry between professional visits.

CREST has the actual research and recognition of effectiveness.

In fact, CREST has more extensive research than any other fluoride dentifrice, and the only clinical research to prove *added* anticaries protection... over and above the protection provided by office-applied fluorides. Give your patients MORE protection... recommend clinically proven, clinically tested CREST.



"Crest has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."— Canadian Dental Association.



Leadership in research=Confidence in Crest

© 1976 PROCTER & GAMBLE TORONTO CAS 381



**Now there are three Dentsply® Cavatron® Units.
They have their differences.
What they have in common is their uncommonly
gentle and efficient prophylaxis.**

*Ask your preferred
Dentsply dealer.*

"CAVITRON", "POWERMATIC" and "SEVENTY SIX"
are trademarks of Cavatron Corporation.

© 1977 Dentsply International, Inc.
All rights reserved.



These Dentsply-Cavatron Ultrasonic
Scaling Devices are Acceptable for
use in scaling and cleaning surfaces
of teeth in conjunction with other
suitable prophylactic measures.

JOURNAL

of the Canadian Dental Association
de l'Association Dentaire Canadienne
August/Août 1977/Volume 43/No 8

PUBLISHER/Canadian Dental Association
SCIENTIFIC EDITOR/R. S. Turnbull, DDS
EDITOR/Diane Charter
FRENCH SCIENTIFIC EDITOR/Robert Lambert, DDS

MANAGING EDITOR/ADVERTISING/Anna Spencer
EDITORIAL SECRETARY/Mary Maxwell
CLASSIFIED ADVERTISING/Marie Cosgrave
CIRCULATION/Cathy Cronin

ISSN 0382-8514

Regular Features

Announcements	346
Les actualités dentaires	349
Dentistry in the news	355
Deaths	356
In memoriam	356
FDI/CDA Congress News	362

Articles

The impacted third molar — Raley, Chapnick and Baker	364
Trigeminal neuropathy — Wallace	367
An in vitro assessment of oral prophylaxis procedures. A scanning electron microscopy study — Galil	370

Classified Advertising	374
------------------------	-----

Advertisers' index	376
--------------------	-----



Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1977 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454.

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association.

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1977 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22).

Veuillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences. Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise.

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Announcements/Avis

Canadian Dental Association

1977, Toronto, October 22-28
1978, Winnipeg, September 10-13

Fédération Dentaire Internationale 65th Annual World Dental Congress

1977, Toronto, October 22-28
FDI/CDA Congress Office: P.O. Box
6423, Terminal A, Toronto, Ontario
M5W 1X3.

Canadian Meetings

Northern Ontario Dental Association, 37th Annual Meeting, Timmins, September 15-18, 1977. Contact: Dr. W. R. Yates, Suite 130, 38 Pine North, Timmins, Ontario P4N 6K6.

Canadian Academy of Restorative Dentistry, Annual Meeting, Park Plaza Hotel, Toronto, October 19-21, 1977, just prior to the FDI World Dental Congress. Contact: Dr. D. B. McAdam, Associate Professor, Department of Restorative Dentistry, University of Toronto, 124 Edward St., Toronto, Ontario M5G 1G6.

Canadian Association of Orthodontists, Annual Meeting, Hyatt Regency Hotel, Toronto, October 20-23, 1977, just prior to the FDI World Dental Congress. Contact: Dr. J. Schachter, P.O. Box 952, Saskatoon, Saskatchewan S7K 3M4.

Canadian Society of Public Health Dentists, Annual Meeting, Sheraton Centre, Toronto, October 23, 1977, just prior to the FDI World Dental Congress. Contact: Dr. D. Lewis, Faculty of Dentistry, University of Toronto, 124 Edward St., Toronto, Ontario M5G 1G6.

Canadian Dental Hygienists Association, Annual Meeting, Bond Hotel, Toronto, October 23-27, 1977, in conjunction with the FDI World Dental Congress.

Canadian Dental Nurses and Assistants Association, Annual Meeting, Holiday Inn, Civic Square, Toronto, October 23-27, 1977, in conjunction with the FDI World Dental Congress.

Canadian Society of Oral Surgeons, Annual Convention, Hyatt Regency Hotel, Toronto, October 28-31, 1977, following the FDI World Dental Congress. Contact: Dr. W. Prusin, Convention Chairman, 919 Ellesmere Rd., Scarborough, Ontario M1P 2W7.

Royal College of Dentists of Canada, Medical Sciences Auditorium, University of Toronto, October 29, 1977, following the FDI World Dental Congress.

Canadian Academy of Endodontics, Annual Meeting, Hyatt Regency Hotel, Toronto, October 29-30, 1977, following the FDI World Dental Congress. Contact: Dr. J. M. Phillips, 12½ Simcoe St. South, Oshawa, Ontario L1H 4G2.

Canadian Society of Forensic Science, Odontological Section, Chateau Lacombe, Edmonton, November 3-5, 1977. Contact: Dr. R. B. J. Dorion, Suite 710-D, Sun Life Building, Montreal, Quebec H3B 2V6.

Ontario Society of Clinical Hypnosis, Two Workshops to run concurrently, Royal York Hotel, Toronto, November 11-13, 1977. (1) Introduction to clinical hypnosis; (2) Practical therapeutic applications of hypnosis. Contact: Dr. Alan Banack, OSCH, 243 St. Clair Ave. West, Toronto, Ontario M4V 1R3. Phone: (416) 922-8300.

Montreal Dental Club Pre-Convention Seminar, Queen Elizabeth Hotel, Montreal, November 12-13, 1977. Contact: Miss M. Komarnicka, 55 LaFleur St., Ville La Salle, Quebec H8R 3G7.

Montreal Dental Club Fall Clinic, Queen Elizabeth Hotel, Montreal, November 14-16, 1977. Contact: Miss M. Komarnicka, 55 LaFleur St., Ville La Salle, Quebec H8R 3G7.

Academy of Dentistry, Winter Clinic, Royal York Hotel, Toronto, November 24, 1977. Contact: Mrs. P. Williams, Executive Secretary, Academy of Dentistry, 234 St. George St., Toronto, Ontario M5R 2N5.

Les Journées Dentaires du Québec, Quebec Hilton Hotel, Quebec City, May 28-31, 1978. Contact: Dr. R. M. Lang, 5171 Decarie Blvd., Montreal, Quebec H3W 3C2.

Pacific Dental Federation Convention, Vancouver, July 23-26, 1977. Contact: Dr. Ken Neuman, President, Pacific Dental Federation, 1125 West 8th Avenue, Vancouver, British Columbia V6H 3N4.

International Meetings

Hungarian Dental Association, 12th Congress, Pécs, Hungary, August 25-27, 1977. Contact: Professor I. Szabo, 7621 Pécs, Dischka Gyoza u.5. Hungary.

New Orleans Dental Conference, sponsored by the New Orleans Dental Association, Hyatt Regency Hotel, New Orleans, September 15-18, 1977. Contact: New Orleans Dental Conference, 2121 North Causeway Blvd., Suite 272, Metairie, Louisiana 70001. Phone: (504) 834-6449.

International Epidemiological Association, 8th International Scientific Meeting, Las Croabas, Puerto Rico, September 18-20, 1977. Contact: Dr. Carlo Luis Gonzales, Program Secretary, Universidad de Los Andes, Facultad de Medicina, Centro de Estudios de Post-Grado, Merida-Venezuela.

International Association for Orthodontics, Annual Meeting, Bayshore Inn, Vancouver, British Columbia, September 21-24, 1977. Contact: IAO National Office, 645 North Michigan Ave., Chicago, Illinois 60611.

American Society of Oral Surgeons, Annual Meeting, San Francisco, September 24-28, 1977. Contact: ASOS Headquarters, 211 East Chicago Ave., Chicago, Illinois 60611.

Dental Association of South Africa, 5th International Scientific Congress, Stellenbosch, Republic of South Africa, September 26-30, 1977. Contact: Dr. L. S. Maresky, Congress Secretary, P.O. Box 96, 7503 Parowvallei, C.P., South Africa.

American Academy of Periodontology, 63rd Annual Session, Sheraton-Boston Hotel, Boston, Massachusetts, October 5-8, 1977. Contact: American Academy of Periodontology, 211 East Chicago Ave., Room 924, Chicago, Illinois 60611.

American Dental Association, 118th Annual Session, Miami Beach Convention Centre, Florida, October 9-13, 1977. Contact: American Dental Association, 211 East Chicago Ave., Chicago, Illinois 60611.

Society for Clinical and Experimental Hypnosis, 29th Annual Workshop and Scientific Program, Hyatt House Hotel, Los Angeles, October 11-16, 1977. Contact: Mrs. Marion Kenn, Administrative Director, SCEH, 129A Kings Park Drive, Liverpool, New York 13088.

American Society of Clinical Hypnosis, Annual Workshop and Scientific Meeting, Omni International Hotel, Atlanta, Georgia, October 16-22, 1977. Contact: William E. Hoffman Jr., Executive Director, Suite 218, 2400 Devon Ave., Des Plaines, Illinois 60018.

Fédération Dentaire Internationale, 65th Annual World Dental Congress, Toronto, October 22-28, 1977. Con-

tact: FDI/CDA Congress Office, P.O. Box 6423, Terminal A, Toronto, Ontario M5W 1X3.

Winter Medical-Dental Assembly, New Stanley Hotel, Nairobi, Kenya, East Africa, October 28 - November 18, 1977. Contact: Dr. Anthony T. Wachna, North American Chairman, 504 Medical Arts Building, Windsor, Ontario N9A 4J9. Phone: (519) 253-9393.

American Institute of Oral Biology, 34th Annual Meeting, Spa Hotel, Palm Springs, California, November 4-8, 1977. Contact: Executive Secretary, P.O. Box 481, South Laguna, California 92677.

French Dental Association, 1977 National Congress, Congress Hall, International Centre in Paris, November 23-26, 1977. Contact: Alain Deyrolle, Secretary General, French Dental Association, 19 bis, rue Legendre, 75017 Paris.

**IMPACT,
RESPONSE,
RESULTS**
when you advertise in
The Journal of
The Canadian Dental
Association

- PRIME EXPOSURE FOR
YOUR ADVERTISING
- HIGHEST CIRCULATION
FIGURES IN CANADA
- UNIQUE, WELL-PLANNED
EDITORIAL PROGRAM
- EVERY ISSUE BILINGUAL
- TOP QUALITY REPRODUCTION
- COMPETITIVE RATES



Contact Business Manager:
**JOURNAL OF THE CANADIAN
DENTAL ASSOCIATION**
1815 Alta Vista Drive, Ottawa
Ontario K1G 3Y6
Telephone: (613) 523-1770



IS THIS THE DIRECTION OF YOUR PRACTICE?

ORTHODONTICS—the one phase of dentistry that will experience the greatest growth.

Doctor, if you are not now, at some time in the future you may include in your practice your share of the expanding interest in orthodontics.

ORDONT has been serving the particular orthodontic requirements of the General Practitioner for almost 30 years. Perhaps our service also can be of value to you, but only you, Doctor, can judge the needs of your practice. Why not take this opportunity to evaluate an **ORDONT** appliance for your next case? Send models for a laboratory cost estimate at no obligation.

Please complete and return this coupon.

☐ Send your pre-addressed postage-paid mailing convenience packet, including speed mailer boxes. **ORDONT** pays all postage costs.

☐ Send descriptive Price Schedule of laboratory services

DOCTOR _____

STREET _____

CITY _____ STATE _____ ZIP _____

Ordont Orthodontic Laboratories, Inc., P.O. Box 3636, Fenton, MO 63026

Orthodontics has always been our service to the profession—orthodontics is our only service.



Son traitement au fluorure est terminé. Laissez le fluorure de Colgate prendre la relève

Le fluorure MFP* de Colgate* donne à vos clients une protection supplémentaire contre la carie, entre deux traitements.

C'est un fait. Nos tests cliniques ont prouvé que l'emploi **seul** de Colgate au fluorure MFP réduisait considérablement le taux de caries nouvelles. Dans le cadre d'un traitement local, il devrait donc entraîner une réduction encore plus notable.

Colgate au MFP présente des avantages spécifiques et importants:

1. L'usage régulier de Colgate rend les dents plus résistantes à la carie. Nous croyons que le MFP

(monofluorophosphate de sodium) contenu dans Colgate parvient à transformer la couche d'apatite qui recouvre les dents, en fluorapatite (un fluorophosphate de calcium), grâce à la similarité de propriétés chimiques de ces deux substances.

2. Tandis que certains dentifrices ont tendance à tacher les dents, il est bon de savoir que Colgate avec MFP ne présente pas ce problème.

3. Colgate au MFP est reconnu pour la stabilité de son fluorure; même après trois ans, le monofluorophosphate de sodium reste présent et efficace.

Aussi, dès que vous aurez terminé leur traitement au fluorure, parlez à vos clients de cette protection supplémentaire que leur apporte le dentifrice Colgate au MFP. Donnez-leur une chance de plus de lutter contre la carie.

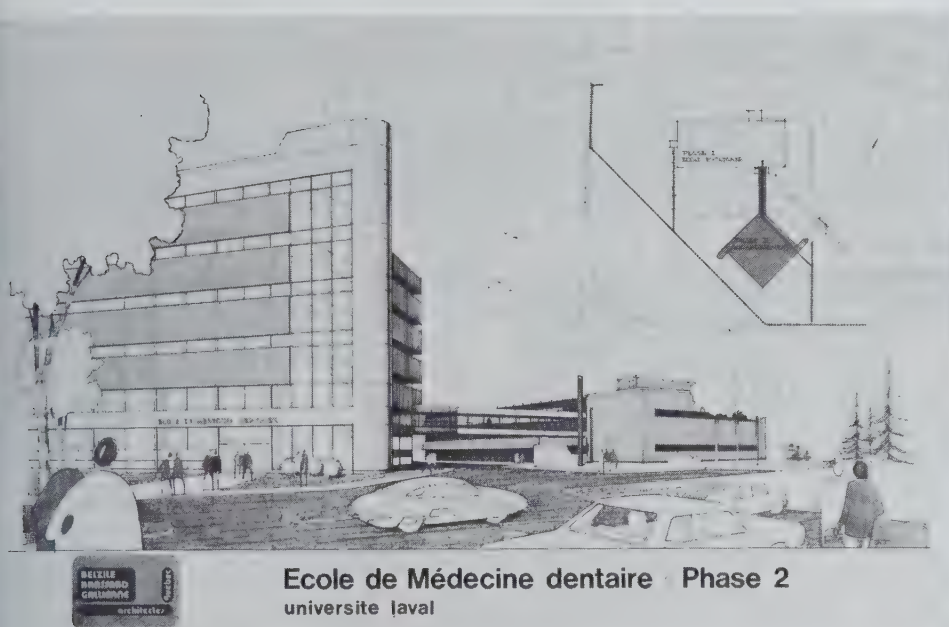


"Colgate avec MFP s'est révélé un dentifrice préventif contre la carie dentaire et son emploi peut avoir une valeur importante lorsqu'on l'utilise dans le cadre d'un programme d'hygiène buccale exécuté avec application et de soins dentaires professionnels réguliers."

L'Association Dentaire Canadienne

Colgate-Palmolive Canada

*TM Reg'd.



Ecole de Médecine dentaire Phase 2
université laval



Dr. Paul Simard, directeur de l'Ecole médecine dentaire

INAUGURATION OFFICIELLE DU NOUVEAU PAVILLON DE L'ECOLE DE MEDECINE DENTAIRE DE LAVAL

Près de trois cents invités ont assisté, le 13 juin dernier, à l'inauguration officielle des locaux abritant l'Ecole de médecine dentaire de Laval et c'est avec une profonde fierté que les autorités de l'Université et les dirigeants de l'Ecole ont accueillis les autorités politiques, les doyens et professeurs de toutes les facultés dentaires canadiennes, certains responsables de la fondation de l'Ecole de médecine dentaire de Laval et d'autres invités, y compris les étudiants.

Cette fierté, loin d'être inspirée par l'auto-suffisance, relève plutôt de l'incroyable dévouement prodigué par le corps professoral soutenu d'un directeur à la hauteur des ambitions légitimes et parfois hasardeuses du rêve commencé il y a environ 30 ans, alors que des dentistes de la Société de stomatologie de Québec amorcèrent l'idée d'une faculté dentaire à l'Université Laval.

Cette fierté relève aussi du fait qu'en dépit des malcommodités dues à l'aménagement inadéquat des premiers locaux, les professeurs et la direction de l'Ecole se méritaient dès la 1ère graduation, en 1975, l'hommage du

secrétaire de l'Ordre des dentistes qui s'exprimait en ces termes: "Nous tenons à signaler la qualité généralement exceptionnelle de ces nouveaux dentistes tant au point de vue de la compétence professionnelle que du sens de l'éthique et du comportement très humain avec les patients". (Dr. M. Archambault)

Il y a là matière à alimenter une légitime satisfaction du devoir accompli. Cette satisfaction est devenue une autre source d'ambitions et déjà, on a organisé un programme gradué en chirurgie maxillo-faciale, tout en se préparant à d'autres programmes gradués et à la recherche; les études-Cycle II constituent une mission normale et l'Ecole dentaire de Laval se prépare à l'accomplir.

Egalement conscients du rôle social que doit jouer l'Ecole de médecine dentaire de l'Université Laval, le directeur Paul Simard et les chefs de département ont instauré un programme unique dans la province, par lequel l'étudiant, à son dernier trimestre peut choisir une option disciplinaire clinique donnant ainsi une distribution de services à la population tout en favorisant

l'attrait des étudiants pour la spécialité qui est trop rare à l'est de la province.

Dans son allocution le Dr Paul Simard mentionnait aussi que l'aménagement actuel des locaux limitait l'admission à seulement 24 étudiants. Nettement insuffisant ce nombre devrait être plus que doublé. "On comprend donc l'urgence de la phase II" disait-il, faisant allusion au fait que la structure actuelle de phase I devrait être complétée au plus tôt possible, car ajoutait-il, "Il ne faut pas perdre de vue que dans tout mode de distribution de services, le dentiste devra constituer le noyau, la cheville ouvrière de toute forme d'équipe susceptible d'être implantée pour autant que l'on veuille assurer à la population des soins de première qualité. C'est dans cette optique que nous demeurons au service de la collectivité".

Il a également souligné l'essentielle nécessité de l'apport gouvernemental pour la réaliser l'agrandissement — phase II, pour permettre à l'Ecole de jouer un rôle encore plus important dans les secteurs sous-gradués et gradués, dans une distribution plus grande de service à la population. Cette der-

De belles couleurs naturelles de dents
pour la plupart des restaurations.

Le choix de teintes Trubyte® Bioform®.



Avez-vous réalisé que vous pourriez utiliser votre Guide de Teintes Bioform pour à peu près toutes les restaurations prothodontiques fixes et amovibles?

N'est-ce pas pratique? ... et si précis en même temps.

N'oubliez pas de prescrire les produits de qualité Dentsply qui ont été fabriqués spécialement pour aller avec votre guide de teintes ...

Les dents **TRUBYTE BIOFORM** en porcelaine et en plastique
pour des prothèses complètes et partielles.

La porcelaine **BIOBOND**® pour les couronnes et ponts.

La porcelaine à l'alumine **TRUBYTE BIOFORM** pour les couronnes.

CAULK® **BIOLON**® pour facettes de plastique.

Si vous ne possédez pas encore l'un des quelque 70,000 mille guides de teintes Trubyte Bioform actuellement utilisés, vous pouvez en obtenir un chez votre distributeur Dentsply.

TRUBYTE®

Dentsply Canada, Ltd. Toronto 2-B, Ontario
Tous droits réservés.

nière dimension est d'autant plus importante à Québec parce que la concentration des spécialistes est relativement faible si comparée à l'ouest de la province, de sorte que les besoins des citoyens normalement accessibles dans un rayon raisonnable doivent être recherchés trop souvent dans le secteur montréalais.

On envisage aussi, toujours dans la perspective du rôle social de l'Ecole, la tenue de sessions cliniques pour le recyclage des dentistes praticiens.

Bref, l'Ecole de médecine dentaire de l'Université Laval a atteint rapidement de vastes objectifs et il n'en tient qu'aux autorités gouvernementales de lui permettre d'aller de l'avant dans les ambitions qu'elle se sait capable et prête à réaliser.

Invité à prononcer une allocution, Monsieur Marc Lalonde, ministre de la santé et du bien-être au gouvernement fédéral a bien saisi le message du Directeur de l'Ecole: la phase II est une priorité. "Signe prémonitoire, que cette maquette" a dit le ministre apercevant l'illustration du futur pavillon. Il a rappelé que le gouvernement fédéral avait déjà contribué plus d'un million et demi à la réalisation actuelle. Ce financement représente 50 pour cent de l'aménagement et de la réfection de l'édifice jadis occupé par la faculté de psychologie. Les fonds de la Caisse d'aide à la santé du gouvernement fédéral ont ainsi aidé d'autres écoles de médecine et médecine dentaire du Ca-

nada. Les fonds n'étant pas encore épuisés, Monsieur Lalonde termina son discours avec la promesse que le fédéral contribuera au parachèvement de la phase II.

Cette promesse a fait la joie de l'assistance, sans pour autant semer la panique à son homologue du gouvernement provincial, le docteur Lazure, qui pourra alors faire les récupérations à frais partagés avec le fédéral, lorsque l'actuel gouvernement donnera le feu vert. D'après les propos du ministre tous les espoirs sont possibles puisqu'il a aussi rassuré les auditeurs sur le fait que son gouvernement était bien conscient des difficultés qui se rattachent à la distribution des soins dentaires dans plusieurs régions du Québec. Il a félicité le gouvernement antérieur d'avoir fondé une Ecole de médecine dentaire à Québec. C'était le premier pas vers une solution, et face aux exigences du développement nécessaire, le docteur Lazure se propose de "discuter dès la semaine prochaine" avec son collègue fédéral de la priorité qui a inspiré le ministre des affaires sociales à dire "vous pouvez compter sur mon appui total".

Se basant sur ces déclarations, les autorités de l'Ecole ne peuvent que se réjouir de la prise de conscience manifestée par les représentants gouvernementaux qui demeurent, en fin de compte, les grands responsables du financement nécessaire qui suppose la phase II. Certaines promesses électora-



Les ministres Denis Lazure (à gauche) et Marc Lalonde (à droite) font leur entrée au Pavillon, précédant le recteur de l'Université Laval, M. Jean Guy Paquette (au centre arrière-plan)

les peuvent parfois retarder, mais lorsqu'il s'agit de la santé du Québec, il est normal de croire à la réalisation à court terme, surtout à la pensée que les ministres fédéral et provincial ont fort bien exposé les besoins, les multiples conséquences inhérentes à la situation dentaire actuelle.

Le mot de la fin revenait à Monsieur Jean-Guy Paquet, recteur de l'Université Laval. Il a, au tout début, manifesté un intérêt évident à l'expansion des services universitaires, en récupérant, par exemple, les locaux au Grand séminaire. Il donna un bref résumé de l'histoire de l'école de médecine dentaire et remercia chaleureusement les ministres Lalonde et Lazure des promesses qu'ils ont faites pour concrétiser les ambitions de la phase II.

Dr. Robert Lambert

L'Université de Saskatchewan nomme un nouveau doyen

Le Dr Ernest R. Ambrose a été nommé au poste de doyen du Collège dentaire de l'Université de Saskatchewan pour une période de cinq ans à partir du 1er juillet 1977. Le Dr Ambrose était préalablement doyen de la Faculté dentaire de l'Université McGill.

Il succèdera au Dr C. W. McPhail, qui quitte ce poste administratif pour se consacrer à l'enseignement et à la recherche.

Le Dr Ambrose fait partie du personnel de McGill depuis 1950; il y enseignait alors à temps partiel tout en

exerçant sa profession dans le secteur privé. Il travaille à McGill à temps plein depuis 1958, d'abord à titre de Chef du Département de dentisterie opératoire; en 1966, il fut nommé Directeur de la Division de dentisterie de restauration et en 1970, Doyen de la Faculté dentaire.

Dans le domaine clinique, il a servi à titre de chirurgien dentiste en chef à l'hôpital Montreal General et de consultant à trois autres hôpitaux. Il a siégé au Comité des tests d'aptitude d'éducation dentaire ainsi qu'au Conseil national des examinateurs den-

taires. Il était également consultant en dentisterie de restauration au Corps dentaire royal canadien.

L'an dernier, le Dr Ambrose a dirigé un groupe d'enquête qui étudiait la qualité de certains services sélectionnés qu'effectuent les infirmières dentaires en vertu du Régime dentaire du Saskatchewan. Il a également collaboré à d'autres enquêtes semblables applicables aux hygiénistes dentaires en Ontario et à l'Île du Prince-Édouard.

Né à Montréal, le Dr Ambrose a fait ses études à l'Université McGill.

NOUVELLES BREVES

- Un médecin de St. Paul, Minnesota, le Dr. John B. Brainard soutient que les goûters salés — pretzels, croustilles, noix salés — peuvent déclencher des migraines, surtout si ingérés alors que l'estomac est vide. (*Médecine Moderne du Canada*, Nov. 1976)
- La céphalée est souvent subie par les dentistes après une journée de travail. D'après le Dr Malcolm Cameron de Brisbane, Australie, "les céphalées sont rarement, si jamais, liées à une fatigue oculaire due à des troubles de la réfraction ou de l'accommodation et surviennent seu-

lement de façon peu fréquente au cours des déséquilibre musculaires des yeux." Il croit plutôt que la contraction soutenue du cuir chevelu, des muscles du visage et du cou, due à la frustration d'une vision brouillée entraîne des céphalées plutôt que la contraction du muscle ciliaire. (*Médecine Moderne du Canada*, Nov. 1976.)

- Il y a quelques années, on prétendait que le brunissage des amalgames après l'insertion n'était pas recommandable, prétextant que cette procédure augmente le pourcentage de mercure résiduel en surface, ou encore que le fait de brunier en une direction engendre l'ouverture marginal de l'amalgame au côté opposé. Les Drs. Kato et Fusayama de l'Ecole Dentaire de Tokyo (Ref. Journal of Prosthodontic Dentistry — Vol. 19 #4, P. 393-398) démontrent que six heures après son insertion l'amalgame se stabilise, de sorte que sa contraction initiale est facilement compensable en brunissant après la sculpture, donnant les avantages suivants:

Meilleur scellement des contours
Polissage plus facile
Réduction de mercure résiduel.

- Des chercheurs de l'Université du Michigan ont récemment avancé qu'une dentisterie était pratiquée 2500 avant J.-C. Les Drs. James Harris et Zaki Iskander, respectivement des écoles dentaires du Michigan et d'Egypte, décrivent une prothèse fixe de plusieurs unités reliées par une bande d'or enroulée aux dents piles. (*Dental Student*, Nov. '76)
- Le Dr. H. Ressek du "U.S. Public Health Service" après une étude sur 15,000 dentistes, avocats, et médecins, estime que l'incidence des maladies cardiaques est proportionnelle au stress exercé par l'occupation. En relation avec l'âge des individus, le dentiste est sujet aux maladies coronariennes dans une proportion de 3½/1. (*Dental Student*, Nov. '76).

Dr. Robert Lambert

Price Ripoff ?

Good news for dentists who complain about the excessive prices of dental supplies! Denco knows of a way to lower them.

All we need do is reduce the quality and extent of our product-line to the barest minimum. Then eliminate our Personal Sales Representation; Quick Delivery; Repair Services; Charge Accounts; Returns and Credit Policies; Support for Dental Undergraduates; Instruction for Auxiliaries; and our involvement with the dental community. We'd be heroes. Right?

Not true. The majority of our customers firmly believe that the services of a full-line supplier, like Denco, are essential to the effective and efficient operation of a professional dental practice... and would feel "ripped-off" without them.

Believe us, Doctor.
The price is right!

DENCO



VICTIME D'HOMICIDE NON IDENTIFEE

Le 23 mai 1975, on a découvert le corps d'une jeune femme qui flottait dans la rivière Nation près de Casselman, Ontario, à environ 30 milles à l'est d'Ottawa. La description de la victime, brutalement assassinée, est la suivante: 25 à 35 ans, 5'3", 100 à 110 livres, cheveux teints blonds-roux (couleur naturelle: châtain foncé).

La Police Provinciale d'Ontario demande aux dentistes du Canada entier leur assistance afin d'arriver à identifier cette personne. Le Dr James D. Purves de Toronto a effectué un examen approfondi de sa dentition et voici ci-dessous les résultats de son examen:

Dentition

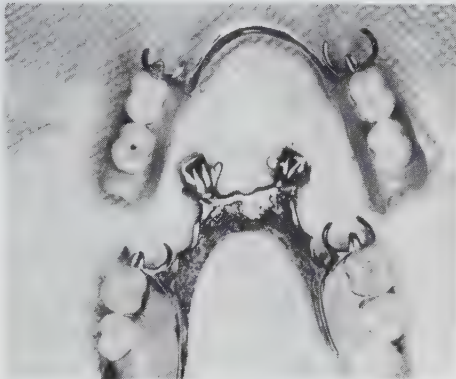
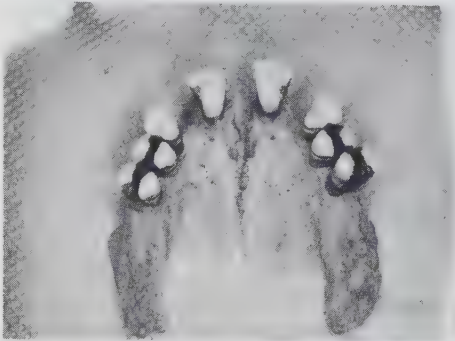
1. Dents présentes (Code International) — #11, #13, #14, #15, #21, #23, #24, #25.
2. Dents obturées — #11 D. silicate; #13 D. amalgame; #14 MOD amalgame; #15 MOD amalgame; #21 D. silicate; #23 M. silicate; #24 MOD amalgame; #25 MOD amalgame.
3. Prothèse partielle du haut chrome cobalt remplace #12, #22; #16, #17, #26, #27 — model fer à cheval — selles acryliques; #22 parement "Steeles" en acrylique; #12 parement "Steeles" en porcelaine.

Arche du Bas

1. Dents présentes — #31, #32, #33, #34, #35, #41, #43, #44, #45 — #42 extraite.
2. Dents obturées — #34, MOD amalgame; #35, MOD fracture amalgame occlusale; #44, MO amalgame; #45, DO amalgame.
3. Prothèse du bas — Partiel chrome cobalt remplace #36, #37, #46, #47 — selle acrylique de la prothèse a été doublée au moins une fois. Le bout de la griffe buccale sur #35 est fracturée.

Constatations générales

1. Appuis occlusale des deux prothèses ont une rainure sur leur surface. De plus deux rainures linguales sur #12 et



- #22 semblent être caractéristique d'un certain technicien.
2. Toutes les dents ont un dépôt évident de calculus (tartre) et sont tachées.
3. Toutes les dents qui lui restent démontrent un état relativement avancé de perte osseuse horizontale.
4. Les dents postérieures manquantes ont été extraites depuis dix ans ou plus.
5. La manière de laquelle les dents sont usées et l'implication périodontique suggère que l'âge de cette victime est entre 30 et 35 ans.

Votre aide et participation à ce propos nous seraient nécessaire pour identifier cette victime d'assassinat.

Pour toute source de renseignement veuillez contacter:

Dr. James D. Purves
suite 928
170 St. George St.
Toronto, Ontario M5R 2M8
Téléphone: (416) 924-2288
ou

Inspecteur W. C. Craig
Ontario Provincial Police
125 Lakeshore Blvd. E.
Toronto, Ontario M5E 1A5
Téléphone: (416) 965-6871, local 55

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 28 février 1977:

Fonds d'actions ordinaires	27.991
Fonds à revenu fixe	19.093
Fonds avec garantie	13.424
L'avoir total (valeur marchande) du régime se montait à \$24,206,227.86.	

Pour de plus amples renseignements, veuillez écrire à CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ont. M5R 2P2.



“...but
if you feel
any pain,
take one or two
N 222 * tablets.”

Not every patient needs an analgesic after dental care — but some do, even though you have done everything possible to avoid any patient discomfort.

When a patient is in pain, or when there is a possibility that pain will occur later, suggest N 222 * tablets.

222 * is a reliable analgesic — you and your patient can depend on it.

INDICATIONS: For relief of mild to moderate pain, fever and inflammation as in influenza, common cold, low back and neck pain, headache, trauma, following dental and surgical procedures.

DOSAGE: Adults — 1 or 2 tablets one to three times daily; Children's dosage, when recommended by a physician: 10 to 14 years, one tablet, one to three times daily; 5 to 10 years, one-half tablet, one to three times daily.

CONTRAINDICATIONS: Gastrointestinal ulceration and sensitivity to any of the components.

WARNINGS: Salicylates increase the effects of anticoagulants. Caution is necessary when salicylates and anticoagulants are prescribed concurrently. Also, salicylates may depress the concentration of prothrombin in the plasma. Large doses of salicylates may affect insulin requirements of diabetics. Salicylates may potentiate sulfonylurea hypoglycemic agents. Analgesic abuse (excessive and prolonged therapy) has been associated with nephropathy. TO AVOID

ACCIDENTAL POISONING ACETYSALICYLIC ACID PREPARATIONS MUST BE KEPT WELL OUT OF REACH OF CHILDREN.

PRECAUTIONS: Give with caution to patients with asthma, other allergic conditions, bleeding tendencies, or hypoprothrombinemia. Salicylates can produce changes in thyroid function tests.

Observe care in use of codeine, although tolerance and addiction are rare. Give codeine with caution to patients with severe respiratory depression. Its depressant effect may be enhanced by concurrent administration of sedatives and tranquilizers.

ADVERSE REACTIONS: *Acetylsalicylic acid:* *Gastrointestinal:* dyspepsia, heartburn, nausea, vomiting, diarrhea, gastrointestinal ulceration and bleeding. *Ear reactions:* tinnitus, hearing loss. *Hematologic:* anemia, leukopenia, thrombocytopenia, purpura. *Dermatologic and Hypersensitivity:* urticaria, angioedema, pruritus, various skin eruptions, asthma and anaphylaxis. *Miscellaneous:* mental confusion, drowsiness, sweating and thirst.

Codeine: Average or large doses may cause various gastrointestinal symptoms such as nausea, vomiting and constipation.

Caffeine: May cause nausea, nervousness, insomnia, headache, vomiting, palpitation, vertigo, muscle tremor, sensory disturbances, excessive diuresis in sensitive patients. Large doses may cause gastric ulceration.

FULL INFORMATION AVAILABLE ON REQUEST

HOW SUPPLIED

N 222 * Tablets — White, scored, engraved 222 on one side. Each tablet contains: acetylsalicylic acid 375 mg, caffeine citrate 30 mg, codeine phosphate 8 mg. Available in tubes of 12; bottles of 40 and 100; also bottles of 60 with safety cap.

*Trademark



(MC-390a)

Frosst
FOUNDED IN CANADA IN 1899
CHARLES E. FROSST & CO.
KIRKLAND (MONTREAL) CANADA

Dentistry in the news

CDA EXECUTIVE COUNCIL APPOINTS NEW DIRECTOR OF ADMINISTRATION

The Executive Council of the Canadian Dental Association is pleased to announce the appointment of George P. Watts as Director of Administration. Mr. Watts will be responsible for the financial operation and overall administration of the Association.

A graduate of Sir George Williams University in Montreal, Mr. Watts is an accredited member of the Guild of Industrial, Commercial and Institutional Accountants. He has an impres-

sive background in the field of accounting with major industrial firms. Prior to joining the staff at CDA, he was Manager of Corporate Finance for Burroughs Wellcome Ltd. in Montreal, an international pharmaceutical manufacturing company, and before that was internal auditor for CA Industries (Canadian Aviation Electronics).

Mr. Watts will be located in the CDA Headquarters offices at 1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6.



George P. Watts

ONTARIO DENTAL ASSOCIATION TAKES ISSUE WITH THE BORROW DENTAL MILK FOUNDATION

During the past seven years the Borrow Dental Milk Foundation of England has continuously strived to publicize its aims and objectives in newspapers across Canada. Basically, the aim of the Foundation is to persuade people to give fluoridated milk or fruit juices to children instead of allowing the water supplies to be fluoridated. However, the organization has taken such an aggressive stance against water fluoridation that it has managed to alienate the dental profession in Canada.

The following correspondence between Dr. Maxwell Bressler of the Borrow Dental Milk Foundation and Dr. Richard F. Evans, immediate Past President of the Ontario Dental Association, illustrates the type of communication circulated by the Foundation and the dental profession's answer.

Dear Dr. Evans,

We were most interested to receive a copy of your speech as recorded in the "Hamilton Spectator". This Foundation entirely agrees with you that any suggestion that fluoride gives rise to the

diseases you mention are utterly without foundation. The giving of fluoride to children, in our experience, has proved to be entirely safe if given in the correct dosage, and we agree with you that the addition of fluoride to the diet reduces dental decay markedly, and suggest steps should be taken that this compound be added to the diet of children.

The objective of this Foundation is to show, and we have pursued this course for many years, that there is a reasonable suitable alternative in giving fluoridised milk to children instead of fluoridating water for the whole of the population.

It is also well known the addition of fluoride to water is a very emotive issue, and there are large numbers of people who object to this course. Further, addition of fluoride to water is markedly wasteful. It is accepted the addition of fluoride to the diet of children from the age of three to 12 years is all that is necessary, for after this age group fluoride has little or no beneficial effect. Again if fluoride was added to water, 99.95 per cent of it

would go down the drain, and would be a complete waste.

The aim of the Borrow Dental Milk Foundation is to promote the giving of fluoride in milk (or in orange, lemon or other fruit drinks) from the age of three to 12 years. This also has the tremendous advantage of being entirely selective. Fluoride in milk would only be given to school-children whose parents agreed to this course, and if the parents did not agree it would not be given.

Milk is a "miracle" substance containing compounds which are vital for good health, energy, work and play in children. Milk is a complex mixture containing proteins, numerous minerals, particularly calcium, phosphorous, and sulphur; vitamins, enzymes and sugar. It is the ideal beverage for growing children, and it seems reasonable this mixture of milk and fluoride should be given to children for their good health.

In these days of financial stringency, economic aspects must be kept to the forefront. It is estimated the addition of fluoride to water would cost, in the first year in the provision of treatment plant,

chemical storage etc., in the region of £ 52 million for Great Britain. It is estimated, for the first year, the addition of fluoride in milk given to all school-children and play-group children from the ages of three to 12 years would be in the region of £ 600,000. The difference is obvious. Further it is interesting to note that recently the North Tyneside Health Authority has become the first N.H.S. area to demand that fluoride introduced into its water to reduce dental decay, should be removed. Fluoride in this area was introduced into the supply for about 140,000 people seven years ago. Members of the Authority now doubt the efficacy or long term safety of fluoridation of water.

All in all, this Dental Milk Foundation would suggest that the better way of introducing fluoride into the diet of the community would be in milk or fruit juices.

We take this opportunity of sending you our pamphlet the "Fluoridation of Milk and its Methodology" by E. W. Borrow and J. G. Davis OBE, together with our recent leaflet which indicates what we have in mind.

We would be grateful if you would give this matter your considered attention, and if there is any further information you require please do not hesitate to get in touch with us.

*Dr. Maxwell Bresler
Borrow Dental Milk Foundation*

Thank you for your letter of May 9, 1977 with its enclosures.

The dental profession in Ontario and, I understand, in all of Canada is quite familiar with Mr. E. W. Borrow and his Foundation. Their campaign has been running in this country since August, 1970 with the object of persuading people to give fluoridised milk or fluoridised fruit juices to children instead of fluoridating the water supply.

Unfortunately, the people responsible for advancing the idea have continually been permitted to disparage fluoridation, and so have antagonized the dental profession, not to mention others. There is no question that the Foundations's method of writing in this

manner to the editors of newspapers where fluoridation is being considered has been a factor in slowing the progress of fluoridation's acceptance.

As far as we in Ontario are concerned, we are totally committed to water fluoridation. Even if most of it "goes down the drain" it is *not* a waste. We have seen too much of its great benefits to children to think otherwise for a moment. As for adults, it does them no harm and may do them some good (whether or not it directly improves their condition is begging the question). Children become adults in what seems like no time at all. Brantford, Ontario was one of the first three cities in the world to start fluoridation thirty-two years ago and would not be without it today. If all children in Ontario had received this benefit at that time, they would, as adults today, have enjoyed a dramatic reduction in the incidence of tooth decay and so have better general health as well as tremendously improved dental health. They would have experienced a saving, not only of teeth, but of money and time as well.

As I am not a scientist, I will leave it to others to judge the merits and use of fluoridated milk. In Canada there are several methods other than fluoridation that are available to use fluoride to reduce the incidence of tooth decay, both systemic and topical. These are considered favourably (a) where fluoridation is not feasible or possible; (b) where fluoridation has not yet been adopted. Absolutely none, however, of the advocates of such methods opposes fluoridation. In fact they support it.

From what I understand of Mr. Borrow, he seems to be a most generous philanthropist and an idealist who has placed his faith in the virtue of adding fluoride to milk, especially for school children. I understand that he has joined the British "Fluoridation Society" which promotes fluoridation and so I cannot believe that he personally is aware of the offensive language used by his people in advancing the concept in Canada.

*R. F. Evans, DDS
Past-President
Ontario Dental Association*

In memoriam

Clarence Husband

It is with regret that the Canadian Dental Association announces the death of Clarence D. Husband of Red Deer, Alberta, on May 15, 1977, at the age of 76.

A 1928 dental graduate of the University of Alberta, Dr. Husband practised in Red Deer until his retirement in 1967. He was a Fellow of the International College of Dentists and was twice elected president of the Alberta Dental Association. He also served as president of the Central Alberta Dental Society.

Dr. Husband was a noted member of the Research Council of Canada for five years.

Deaths

Aunger, William Reid, 74. Stettler, Alberta. University of Toronto, 1929. 27-6-77. Survived by Doris (wife), Albert and Peter (sons), Gordon and Gale (step-sons), and Margaret (step-daughter).

Champagne, J. H. Donat, 84. Montreal, Quebec. University of Montreal, 1919. 6-5-77.

Fulford, Cecil Harold, 82. Peterborough, Ontario. Royal College of Dental Surgeons, 1918. 3-2-77. Survived by his wife.

Husband, Clarence D., 76. Red Deer, Alberta. University of Alberta, 1928. 15-5-77. Survived by Leslie (wife) and Greg (son).

CDA Retirement Savings Plan

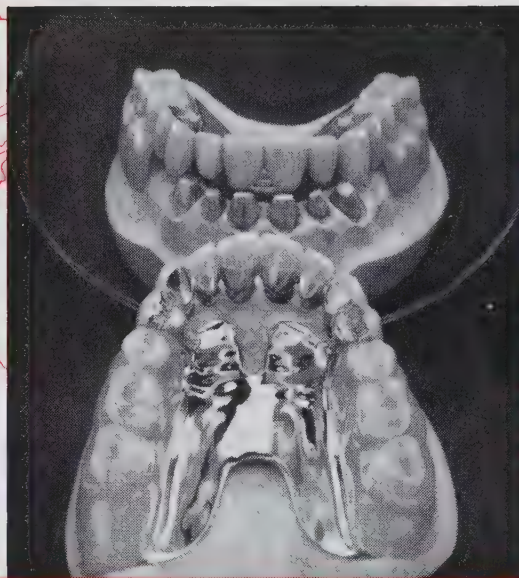
Unit values of the Canadian Dental Association Retirement Savings Plan stood as follows on June 30, 1977:

<i>Common Stock Fund</i>	\$28.651
<i>Fixed Income Fund</i>	\$19.669
<i>Guaranteed Fund</i>	\$13.754

Total assets (market value) of the plan were \$26,292,315.31.

For further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ontario M5R 2P2.

There's a Nobilium laboratory near you



A MARI USQUE AD MARE: FROM SEA TO SEA



Wherever you practice there is a Nobilium laboratory nearby . . . ready to process your partials with the "aristocrat of chromium

alloys" . . . partials that satisfy every patient desire for dependable fit, functional service, oral comfort and lifelike aesthetics. Here is the list of skilled laboratories from British Columbia to Nova Scotia equipped with the latest Nobilium equipment and materials and dedicated to serve your every requirement. Entrust your prescriptions to them with confidence.

ONTARIO — TORONTO

Duracast Dental Laboratories
8 Taber Road, Rexdale

Hirsh Dental Laboratories Limited
495 Adelaide Street West

Modent Dental Laboratory
881 Eglinton Avenue West

Pearce Dental Lab
250 Lawrence Avenue West

**The Posen & Furie
Dental Laboratories Limited**
1366 Bathurst Street

Walter Wood Dental Laboratories
527A Bloor Street West

ONTARIO — HAMILTON

**Allen & Rollaston
Dental Laboratory**
Medical Art Bldg., Hamilton 20

ONTARIO — St. CATHARINES

J. W. Birnie Dental Lab.
206 King Street

ONTARIO — CAMBRIDGE

Achmann Dental Lab.
87 Grand Ave. South

ONTARIO — ORILLIA

Orillia Dental Laboratory
225 West Street North

ONTARIO — OSHAWA

Multi-County Dental Laboratories
172 King Street East

BRITISH COLUMBIA — VANCOUVER

**Northwest Dental Laboratories
Limited**
1070 Homer Street

BRITISH COLUMBIA — VICTORIA

Turner Dental Laboratory
1207 Douglas Avenue, Suite 521

NOVA SCOTIA — AMHERST

**Walter Horton
Dental Laboratories Limited**
31 La Planche Street

ALBERTA — CALGARY

Pro-Dent Lab. Ltd.
6707 Elbow Drive S.W.

Frame Master Lab.
339 - 6th Avenue S.W.

MANITOBA — WINNIPEG

**Associated Crown & Bridge
Laboratory, Limited**
201 - 407 Graham Ave.

Manitoba Dental Labs.
333 Kennedy St.

ALBERTA — EDMONTON

Northwest Dental Laboratory
10540 - 115th Street

Universal Dental Laboratories Ltd.
10066 Jasper Avenue

New-Johnston Dental Labs.
10202 - 102 Street

SASKATCHEWAN — SASKATOON

Ceramic Dental Labs. Ltd.
304 Canada Building

QUEBEC — STE. THERISE

Lafond & Joly Dental Lab.
94 Blainville Ouest

QUEBEC — GRANBY

Julien-Ste. Jean Dental Lab.
356 Rue Principale

QUEBEC — MONTREAL

Dentarium Laboratories
6997 Victoria Avenue

Nobident Dental Laboratory
3726 Jean-Talon West

Roger Sauve Dental Laboratory
5545 Beaubien Est

QUEBEC — QUEBEC CITY

G. Garneau Dental Lab.
386 Dorchester, Sud

NOBILIUM PRODUCTS OF CANADA, LIMITED 1366 BATHURST STREET, TORONTO 4, CANADA

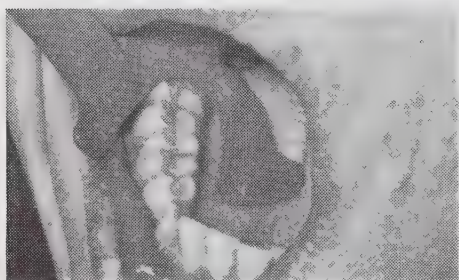
New Products



NO-HANDS X-RAY SHIELD:

This is a handy x-ray protection shield which is held in place by a non-slip plexiglass support in the front and two lead loaded hangers at the back. Made of .5mm plastic lined lead, it protects any exposed areas against secondary radiation. It is placed in a matter of seconds and ensures patient's acceptance and co-operation ...

Available from **WEIL** ...



NEW ASPIRATOR DESIGN EXPOSES A FULL QUADRANT

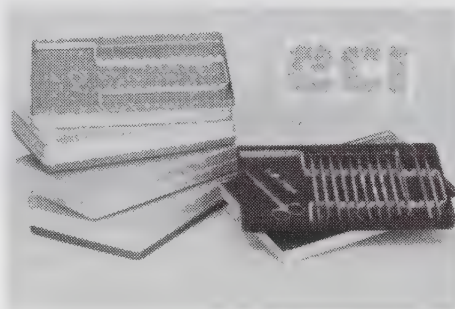
It is unique tongue and cheek retractor-aspirator, anatomically correct to allow unobtrusive working area on lower quadrant from wisdom tooth to centrals. Connecting to high-power suction outlet, it is ideal for 4-handed dentistry. Sucks all moisture and secretion from the lingual and labial. It is made of a suitable plastic, which will not suck up tissue and can be sterilized up to 170°C in an autoclave, or dryheat sterilizer. Supplied in pairs of right and left.

Available from **WEIL** ...

ECONOMICAL, COLOUR-KEYED INSTRUMENT TRAYS

At a saving of 30-50%, these colour coded, heavy gauge aluminum trays are ideal for instrument sterilization, using dry-heat, autoclave or gas. Each rack accommodates 13 instruments and has space for a variety of small items. The dimensions are 11 1/8" x 7 1/2" x 1 9/16" including the cover. Suitable for all sorts of procedures and ideal for Hygienist's use. The cover has a built-in bevel to accommodate the trays when in use. Stocked in five colours; silver, green, red, blue and gold.

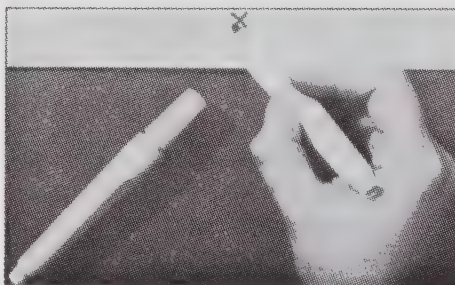
Available from **WEIL** ...



FIRST STERILMARKER PEN

This is a specially designed felt pen used to mark any object with a purple ink which turns to green when sterilization is completed assuring that full and complete sterilization has taken place prior to use. The Sterilmarker is easy and safe to use, non-toxic and suitable for thousands of applications. One pen will draw a line over 275 yards long ...

Available from **WEIL** ...

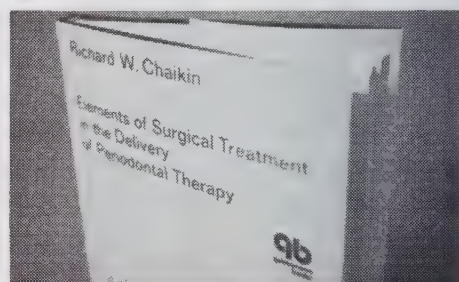


CORAL PROPHY PASTE WITH POPULAR FLAVOURS

This fast cleaning, non spatter-

consistency prophylaxis paste contains 1.23% free fluoride ions, is available in either pink-tropical fruit flavour or white-wintergreen flavour. Either is acceptable to the most fastidious patients. Packed in 9 oz jars or handy single-unit packs of 180 with finger-ring ...

Available from **WEIL** ...



ELEMENTS OF SURGICAL TREATMENT IN THE DELIVERY OF PERIODONTAL THERAPY by Richard W. Chaikin

This text has been directed toward providing complete and detailed step by step illustrations of various soft tissue surgical techniques. Here the reader will find a multitude of photographs outlining the different phases of a surgical procedure in greater detail than usually attempted.

The introductory discussion of periodontia should not be overlooked. The dental practitioner will find basic concepts of periodontic therapy which should be the concern of every responsible doctor.

A special feature is the discussion of a periodontist's point of view of Electrosurgery and Implantology.

Hot off the press with 177 pages, this volume has numerous full colour illustrations.

Available from **WEIL** ...

 **WEIL**

DENTAL SUPPLIES LIMITED

18 Grenville Street, Tor., Ont. M4Y 1A4 (416) 925-5164

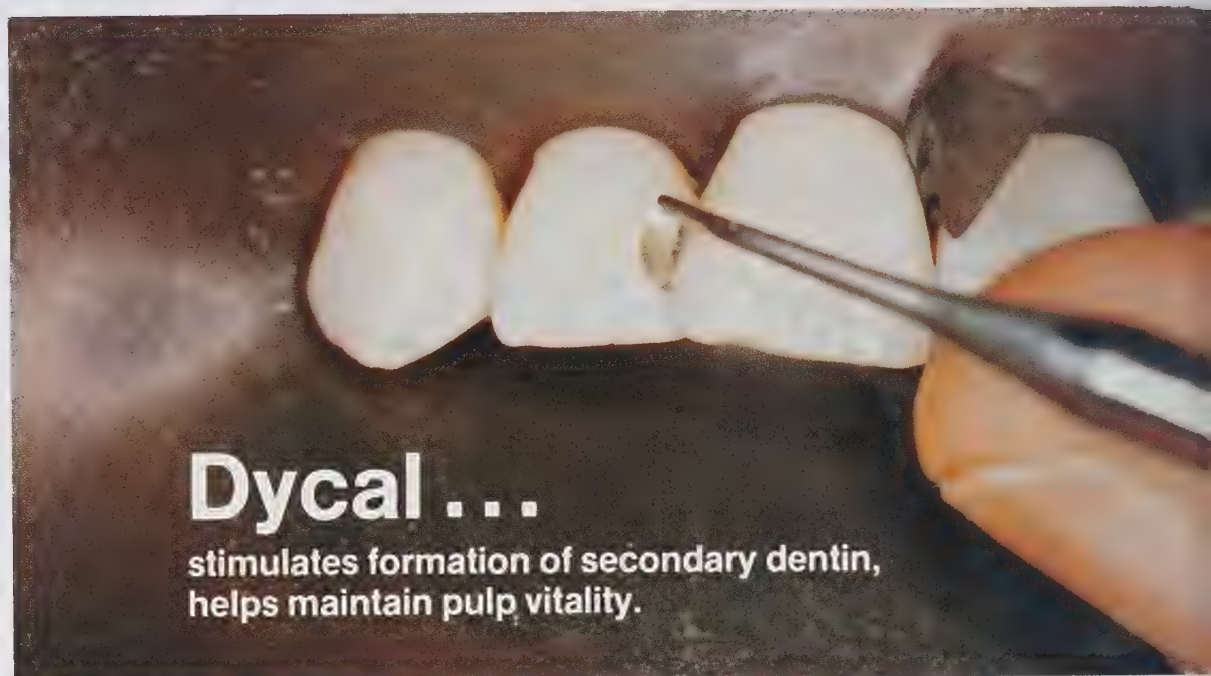
Caulk[®] Dycal[®]

protective base,
pulp cap

Calcium hydroxide
in convenient form and
clinically effective.



For more
information
check number 101



Dycal ...

stimulates formation of secondary dentin,
helps maintain pulp vitality.

- Stays where you put it.
 - Sets hard fast for placement of restorative material or intermediary base.
 - Provides a rigid protective base under amalgam, composite, silicate or resin restorations.
 - Safe to place in cases of exposure or near exposure.
 - Radiopaque—there's little chance of ever mistaking it for caries.
- DYCAL—basic in your operatory.

Caulk

making life
a little easier
for dentists

Division of Dentsply International Inc.



For more
information
check number 101

©1975 Dentsply International Inc.

All rights reserved.

Printed in U.S.

UNIDENTIFIED HOMICIDE VICTIM

On May 23, 1975, the body of a young woman was found floating in the Nation River near Casselman, Ontario. Casselman is about 30 miles east of Ottawa. The deceased, who had been brutally murdered, is described as: 25 to 35 years of age, 5'3", 100 to 110 lbs., dyed reddish-blond hair (natural color — dark brown).

The Ontario Provincial Police requests the assistance of dentists across Canada in the identification of this woman. An extensive examination of the victim's dental work was conducted by Dr. James D. Purves of Toronto and his findings are as follows:

Dentition:

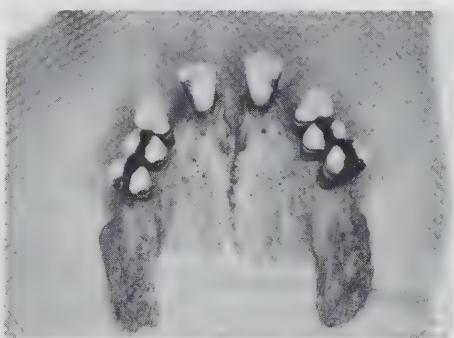
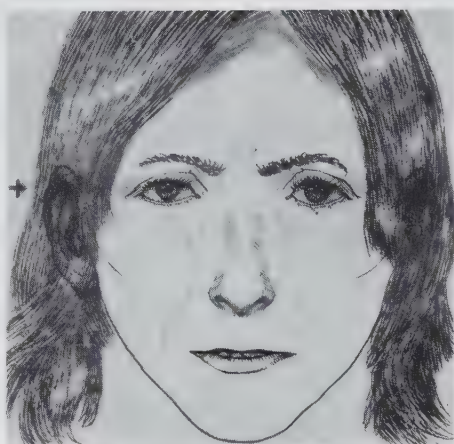
1. Teeth present (International Code System) — #11, #13, #14, #15, #21, #23, #24, #25.
2. Restored teeth — #11 D. silicate; #13 D. amalgam; #14 MOD amalgam; #15 MOD amalgam; #21 D. silicate; #23 M. silicate; #24 MOD amalgam; #25 MOD amalgam.
3. Partial upper chrome cobalt denture replacing #12, #22; #16, #17, #26, #27 — horse shoe type — acrylic saddles. #12 — Steeles facing in porcelain. #22 — Steeles facing in acrylic.

Lower Arch:

1. Teeth present — #31, #32, #33, #34, #35, #41, #43, #44, #45 — #42 evulsed.
2. Restored teeth — #34, MOD amalgam; #35, MOD amalgam occlusal fracture; #44, MO amalgam; #45, DO amalgam.
3. Partial lower — Chrome cobalt partial denture replacing #36, #37, #46, #47 — acrylic saddle denture has been relined at least once; lower left buccal clasp on #35 has a fractured bearing tip.

General Comments:

1. Occlusal rests of both partials have small single grooves on their occluding surfaces. In addition, two lingual

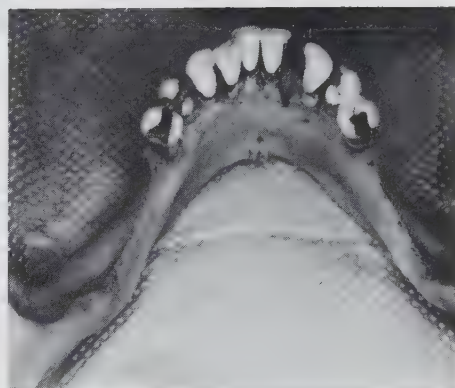


- grooves on #12 and #22 appear to be a characteristic of the dental technician.
2. All teeth exhibit heavy calculus deposits and staining.
3. All remaining teeth exhibit a relatively advanced stage of horizontal bone loss.
4. Missing posterior teeth have been extracted ten years or more.
5. Wear patterns and periodontal involvement suggest the victim is between 30 and 35 years of age.

Your concerned consideration of this murder victim, to aid in her identification is most earnestly solicited. Any information or enquiries can be addressed to:

Dr. James D. Purves,
Suite 928,
170 St. George St.,
Toronto, Ontario M5R 2M8
Telephone: (416) 924-2288
or

Inspector W. C. Craig,
Ontario Provincial Police,
125 Lakeshore Blvd. E.,
Toronto, Ontario M5E 1A5
Telephone: (416) 965-6871, Local 55



Correction

In the News Section of the May issue of the Journal, we reported that the Philips Oralix 65/Optident Dental X-ray unit had been charged with failure to comply with the Radiation Emitting Devices Act.

The National Service Manager of Philips' Medical Systems Division has informed us that the equipment referred to in our news item was all replaced last year and that the remarks in our report do not apply to any Oralix 65/Optident now in use in Canada.

ASPD ends operations

Members of the American Society for Preventive Dentistry were informed at the Seventh Annual Scientific Session, held in Denver in mid-June, that the ASPD plans to terminate operations. The chapter presidents supported this decision and indicated that the impact of preventive dentistry programs will be continued through the independently organized chapters across Canada and the United States.

CURRENT CONVENTIONAL PARTIAL DENTURES

"Current conventional partial dentures" is the title of a lecture to be presented Monday, October 24, by Dr. J. B. Houston of Toronto.

In planning treatment for the partially edentulous patient, the characteristics of the removable prosthesis are often undervalued. In recognition of the advantages of the removable prosthesis in treatment of the partially edentulous, this session will be devoted to the development of basic ideas which relate such prostheses to their supporting structures. Through exploration of fundamental principles, a philosophy of partial denture design will be discussed in relation to clinical procedures and an interim evaluation of treatment outcome given. While clinical applications will be considered during this session, particular emphasis will be placed on the ideas which relate to partial denture design and maximal utilization of residual tissues. At the conclusion of the presentation, participants will have the opportunity to develop partial denture designs for specific clinical problems.

Dr. Houston received his DDS from the University of Toronto's Faculty of Dentistry in 1961 and his Masters Degree from the University of Iowa Graduate School in 1968. After a year of studying in various European centres, he joined the faculty of the University of California at Los



J. B. Houston

Angeles. In 1975 he became Associate Professor and Chairman of Prosthodontics at the University of Colorado School of Dentistry. At the present time he is Professor and Director of Clinics at the University of Toronto's Faculty of Dentistry.

Dr. Houston is the author of numerous papers and clinics and is an active member of many dental organizations, including the American Association of Dental Schools, the American Prosthodontic Society, the Association of Prosthodontists of Ontario, the Canadian and International Associations of Dental Research and the American Board of Prosthodontics. He is also a Fellow of the American College of Prosthodontics.

Affiliated groups meeting during World Congress

The following affiliated groups will be holding meetings in Toronto coincidentally with the FDI/CDA Congress:

Canadian Academy of Restorative Dentistry, October 19-21, at the Park Plaza Hotel.

Canadian Association of Orthodontists, October 20-23, at the Hyatt Regency Hotel.

Canadian Dental Hygienists Association, October 23-26, at the Bond Place Hotel.

Canadian Dental Nurses and Assistants Association, October 20-27, at the Holiday Inn, Downtown.

Canadian Society of Oral Surgeons, October 28-31, at the Hyatt Regency Hotel.

Canadian Society of Public Health Dentists, October 23, at the Sheraton Centre.

Royal College of Dentists of Canada, October 29, at the Medical Sciences Auditorium, University of Toronto.

REGISTER NOW

Don't wait. Since Congress attendance figures are expected to reach record levels, early pre-registration is strongly recommended. For your convenience a registration and hotel reservation form is included at the back of this issue. Fill it out and return it, with your cheque, today. This is one meeting you can't afford to miss.

U of T class reunion

The University of Toronto Class of 1973 plans to hold a class reunion during the FDI/CDA Congress. Their hospitality suite will be at the Hotel Toronto and the reunion is scheduled for Monday, October 24, beginning at 6:30 p.m.

For further information contact: Dr. Wayne Pulver, 4800 Leslie St., Suite 111, Willowdale, Ontario M2J 2K9.

Women dentists' luncheon

The Association of Women Dentists of Ontario will host a special luncheon on Thursday, October 27. All women dentists attending the FDI/CDA Congress are invited to attend and meet their confreres from countries around the world.

For further information contact: Dr. Judith A. Krupanszky, 1331 Highway 8, Winona, Ontario L0R 2L0.

ora-jel-D[®]

The professional denture anesthetic, antiseptic cream saves you chair time.

During the initial new dentures break-in period, patients encounter discomfort that can mean time-consuming office visits to you. Ora-Jel D can be an invaluable aid in your practice. Ora-Jel D starts relieving pain on application. It soothes irritated tissue — without masking the problem. Provides long-lasting pain relief during the critical denture adjustment period and builds patient confidence.

For all dentures, Ora-Jel D makes adjustment easier and faster because it eases pain. Ora-Jel D works just as effectively to relieve soreness and irritation caused by orthodontic appliances.

Ora-Jel D is an easy to use cream that your denture patients can apply at home — to relieve the pain of denture irritation. It also offers anesthetic and antibacterial action. And the relief lasts for hours.

Mail coupon for free professional sample. Ora-Jel D saves time at the chair and keeps problem patients happy.

COMMERCE DRUG (CANADA) LTD.
9190 Charles de Latour St.,
Montreal 355, Canada

Dept. No. J.C.D.A. 8

Name DENTAL LIBRARY
Address 124 EDWARD ST.,
TORONTO 2
Zip _____

THE IMPACTED THIRD MOLAR

Larry Raley, DDS

Paul Chapnick, DDS, FRCD(C)

Gerald Baker, DDS, MS, FRCD(C)

Toronto

The complications which may result from retained impacted third molars are discussed. Contra-indications to extraction are also outlined.

The practising dentist continues to be confronted with the problem of the impacted third molar. The policy generally accepted by most practitioners has been that unless there is discomfort, these teeth are best left undisturbed. While some patients may go through life without complications from third molars, the majority of patients develop complications which may be mild or bizarre in nature.

With evolution, the incidence of the impacted third molar appears to be increasing. In addition, arch length appears to be decreasing with each succeeding generation. Even with an adequate alignment of the dental arch, the distal portion of the third molar, if erupted, is usually covered by tissue other than the preferred attached gingiva.¹ The third molar becomes gradually exposed by posterior growth of the mandible which occurs through resorption of the anterior portion of the ramus and deposition of new bone along its posterior border. The growth of the mandible and accompanying resorption of the ramus as well as maxillary growth are completed by 16 to 17 years of age.

Complications of retention

Pericoronitis has been described as an inflammation of the gingival tissues overlying the crown of a partially erupted third molar.² According to Fitzgerald,³ the unerupted third molar which appears completely embedded, may have a minute fistula connecting it to the oral cavity thereby permitting an ingress of oral microbes. The bacteria may also enter the follicular area via the crevicular space distal to the second molars. This may result in pericoronitis which is generally quite painful and may be manifested by fever, malaise and dysphagia. The infection is usually localized but, because of its anatomical location, infection may spread along the lymphatics, vascular or facial planes (masticator space, infratemporal space) to the lateral pharyngeal space and eventually to the mediastinum — a life-threatening complication.

Pericoronitis unfortunately recurs and there may be osseous destruction not only distal to the second molar but also distal to the third molar. The process of pericoronitis is a vicious circle with the ultimate cure usually being extraction in an already infected area. Consequently, the tendency to postoperative alveolitis and infection is increased.

The position of the third molar is such that, even if erupted, it is frequently a natural food trap and this predisposes the tooth to caries. Accessibility for a restoration is often difficult so the likelihood of dental abscess following a carious pulpal exposure is increased. The impacted tooth may, because of its position, create pressure necrosis on the second molar root with resorption and subsequent pulp exposure. This may lead to the possible loss of the second molar (Fig 1). Deeply impacted teeth, especially in older patients, may undergo idiopathic resorption resulting in pain. In most cases, however, there is an increased sclerosis, ankylosis or an overlying medical condition which makes extraction at this time a more hazardous experience. Neuritis or diffuse neuralgias resulting in pain referred to the ear are among other sources of pain caused by pressure of the third molar on the neurovascular bundle of the mandible.

Mesioangular or horizontally impacted third molars may exert an anterior force which is transmitted to the remainder of the dental arch with resultant anterior incisor crowding. In certain cases, relapse in a malocclusion previously corrected by orthodontia has occurred. Removal of malposed impacted third molars either before orthodontia or soon thereafter may be a good prophylactic measure in ensuring orthodontic success (Fig 2a,2b).

As discussed earlier, partially erupted third molars act as a food trap enhanced by the patient's inability to properly cleanse these teeth. This poor oral hygiene can lead to loss of osseous support as the periodontal condition worsens. According to Hannigan¹ periodontal pockets distal to the second molars are difficult to treat surgically. Consequently, after a long maintained chronic inflammation and subsequent third molar surgery, the loss of osseous tissue distal to the second molars becomes a very severe problem. However, if the third molars are removed early before a gross periodontal condition becomes apparent, bone and attached gingiva distal to the second molars are spared.

One of the most serious complications associated with impacted third molars is cyst formation. The dentigerous cyst is probably the most common type and can be very insidious in that it is usually asymptomatic in its early development. The cyst may be discovered accidentally during routine radiography or may cause gross facial disfigurement in later stages (Fig 3a, 3b). Secondary infection of the cyst results in pain leading not only to the discovery of the lesion but also complicating its treatment. Enucleation of the cyst also carries with it the risks of mandibular fracture. Recent evidence exists, reporting the development of ameloblasto-



Fig 1 Common resorption which can occur from an "asymptomatic impacted molar".

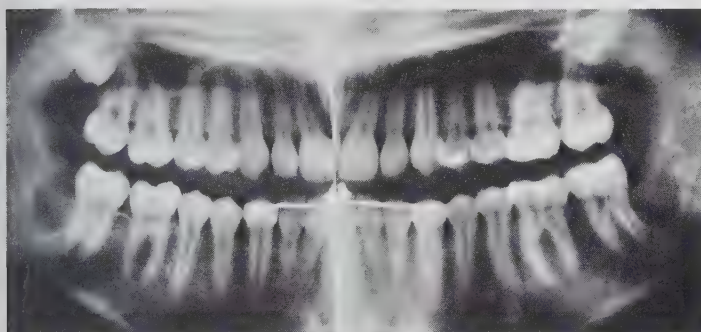


Fig 2a Third molars are often removed for orthodontic reasons as were the mandibular third molars in this case. We advised the upper third molars be removed at the same time but to no avail.



Fig 2b Eight months after lower third molar was removed — observe the position of the left maxillary third molar due to migration from pressure of the cystic follicle.

Fig 3a Asymptomatic cysts often grow from the follicular sac about unerupted teeth.

Fig 3b Cysts often are asymptomatic and may destroy most of the ascending ramus (as this keratocyst) before symptoms of swelling or pain occur.

Fig 3c Ameloblastomas may also result from the follicle of unerupted molars.



Fig 3a

Fig 3b



Fig 3c





Fig 4 Removing second molars to permit the third molars to erupt often leads to this problem, which results in a rather formidable surgical procedure. Good second molars should not be sacrificed for the third molars unless root development of the third molars is incomplete and orthodontic assistance is instituted.

mas in the walls of the cyst or from the dental follicle itself (Fig 3c). Proliferation to a squamous cell carcinoma is also a very real threat.⁴⁻⁶ According to Chapnick et al,⁷ "Every follicle around an impacted tooth can be considered a potential dentigerous cyst and since a dentigerous cyst is a potential ameloblastoma, the removal of all impacted teeth should be considered." Conklin and Stafne⁸ have shown that the dental follicle surrounding the crown of an impacted tooth frequently contains epithelial rests that may be stimulated to proliferation with the resultant formation of dentigerous cysts. Although many dentigerous cysts form during odontogenesis, evidence points out that they may also form in later life as a result of proliferation of the epithelium in these follicles.

Discussion

Apart from the previous considerations, there are several other reasons that would justify removal of third molars prophylactically at an early age (18-25 years). In this age group, osseous tissue is less sclerotic than in older individuals, and there is usually much better osseous regeneration of bone distal to the second molars. The follicular space facilitates dislodgement of the tooth in the younger individuals, whereas this space is missing in older persons with ankylosis being a great possibility. An increase in post-extraction alveolitis is often seen with increasing age. The most ideal time for third molar removal would be when two-thirds of the root formation has occurred. At this stage of development, the hazards of tortuous curvature of the apical portion is eliminated. Not all impacted, malposed or erupted third molars have to be removed. Some common contra-indications to removal are: (1) poor systemic health; (2) an elderly patient with deeply embedded third molars that are asymptomatic both clinically and radiographically; (3) when the vitality of the second molar is compromised or the periodontal health of the second molar would be severely jeopardized by the removal of the third molar; and (4) in young individuals where injudicious removal of the maxillary third molar could jeopardize tuberosity development.

Conclusion

It is our contention that most impacted teeth will be the source of potentially severe problems. The operative and postoperative complications are drastically reduced when the third molars are not pathologically involved. The third molars should be removed as soon as it is evident that there is no space for them or they are in an abnormal position. The second molar should not be removed in order to permit the third molar to erupt (Fig 4), except in special circumstances. In order to aid in the interpretation of the third molar, any full series radiographic study should include a view of the third molar region. It is the general practitioner who will see the patient initially, and with him lies the responsibility for detecting impacted third molars and formulating a treatment plan.

Dr. Raley is in the private practice of oral surgery at 265 St. Clair Ave. West, Toronto, Ont. M4V 1S1.

Dr. Chapnick is an associate at the Faculty of Dentistry, University of Toronto, and chief of oral surgery at Mount Sinai Hospital, Toronto.

Dr. Baker is an associate in the Faculty of Dentistry, University of Toronto, and a member of the oral surgery department at Mount Sinai Hospital.

- 1 Hannigan, E. J. The impacted third molar: to extract or not to extract? *Oral Health* 66:40, 1976.
- 2 Laskin, D. M. Indications and contraindications for removal of impacted third molars. *Dent Clin N Amer* 13:919, 1969.
- 3 Fitzgerald, L. M. The impacted mandibular third molar. *Oregon Dent J* 22:27, 1953.
- 4 Meadow, S. R. Malignant change in a dental cyst. *Oral Surg* 21:282, 1966.
- 5 Williams, I. E. and Newman, C. W. Squamous cell carcinoma associated with a dentigerous cyst of the maxilla. *Oral Surg* 16:1012, 1963.
- 6 Angelopoulos, A. P., Tilson, H. B., Setwart, F. W. et al. Malignant transformation of the epithelial lining of the odontogenic cysts. *Oral Surg* 22:415, 1966.
- 7 Chapnick, P., Weinberg, S., Van de Mark, T. B. et al. Follicular cyst of the mandible: report of a case. *J Oral Surg* 23:533, 1965.
- 8 Conklin, W. W. and Stafne, E. C. Study of odontogenic epithelium in the dental follicle. *J Amer Dent Ass* 39:143, 1949.

TRIGEMINAL NEUROPATHY

J. R. Wallace, BS, DDS
Toronto

Two cases are presented to illustrate drug induced neuropathy and surgical neuropathy. The problems of diagnosis are stressed in order to show the complexities of these entities. The importance of drug histories for patients and knowledge of adverse side effects are emphasized.

The vast portion of painful episodes in and about the mouth and face stem from some form of inflammatory irritation of the sensory nerve distribution of the fifth cranial nerve. Most practitioners are adept in their diagnosis of pain associated with dental decay, periodontal disease, ulcerative lesions, pulpal necrosis, abscess, sinus disease, trauma and TMJ dysfunction. On the other hand, this portion of the human anatomy can also be afflicted with severe pain of a not so self-evident etiology. Trigeminal neuropathy is one of a group classified as atypical facial pain with an obscure etiology. "It is one of the organic causes of atypical face pain and is defined as a disorder of sensation and occasionally of motility that is confined to the distribution of the fifth cranial nerve, either unilaterally or bilaterally. The patients who have trigeminal neuropathy have often experienced previous surgical, medical or mechanical trauma. The pain is more often described as an ache or burning, boring, pulling, drawing, or pressure sensation and is nearly constant."¹ This can be one of the most difficult types of pain to diagnose.

Drug induced neuropathy

A 45-year old male was referred with pain of the left maxillary tuberosity area. He described the pain as a deep, burning ache which caused a "pulling" sensation on the affected side. The pain would radiate over the temporal and parietal areas toward the vertex of the scalp and up into his eye. The intensity of the attacks often were of the magnitude to interfere with his normal activities. He stated that the pain had been his constant companion for about six weeks and was punctuated by one or two acute attacks every day. Although he could not relate any episodes that might be considered as initiating factors, he did say that "blowing his nose" tended to accentuate it. Finally, four to six Anacin tablets would afford some relief.

His medical history was relatively non-contributory other than a "nervous breakdown" five years earlier for which he

was being treated with several medications by a psychiatrist. In the past several months he had changed his work habits which required that he be on the road for long hours at unusual intervals. He noted that at these times he would find himself clenching as a means to combat tension.

An examination of the oral cavity revealed an intact arch of 14 maxillary teeth opposing a tissue borne partial denture replacing all the lower teeth except the cuspids and the right bicuspid. The remaining teeth were in good repair with no evidence of disease. Marked alveolar ridge atrophy was noted. The soft tissues were unremarkable except for point tenderness over the left posterior zygomatic area.

Dental and sinus x-ray studies were negative for abnormality or disease.

The left posterior superior alveolar nerves were anaesthetized with 2 per cent Xylocaine, resulting in almost immediate remission of the pain. Although rather bizarre in that point tenderness of a muscle or muscle group was not noted, an initial impression of myo-facial pain dysfunction syndrome was made. The patient was counselled and appropriate analgesics prescribed.

The patient was seen almost daily for pain relief with injections of Xylocaine. During this period, an occlusal disengagement device was fabricated for him, as a consulting neurologist believed the pain to be stress related and probably resulted from an abnormal jaw habit.

The patient failed to keep his next appointment, only to return one month later desperate for relief. Consultation with his psychiatrist revealed a manic depressive type personality. He had been treated with a variety of drugs in the past and his condition was currently being controlled with Valium 10 mg. h.s. and Etrafon-D, t.i.d. The former drug is not known for adverse or bizarre side reactions involving peripheral neuropathy. Etrafon-D which contains perphenazine 4 mg and amitriptyline hydrochloride 25 mg is not so innocuous.² The latter component is characterized by many different reactions, among which are a loss of libido and possible peripheral neuropathy. The patient reluctantly admitted to the former and further consultation with his psychiatrist led to withdrawing the Etrafon-D.

Within five days the pain had resolved and the patient reported an improvement in his marital relationship. Unfortunately, as time wore on, his mental status deteriorated to the point where the Etrafon-D had to be started once more. The pain returned in 48 hours and he was referred back to

his psychiatrist who promptly discontinued the drug and replaced it with another. The patient has since been pain free.

Surgical neuropathy

Surgical neuropathy can follow any insult to the sensory nerve supply to the mouth: restorative procedures, root canal therapy, simple extraction of teeth or the removal of impacted mandibular third molar teeth. The latter situation is the most frequent cause. Although most cases are of a simple nature, occasionally one presents with a history of multiple surgical insults in the same area.¹

A 28 year old female was seen with the complaint of a vague, boring pain the lower left jaw. She stated that the area felt swollen and she had palpable nodes in her neck. She related that the pain had been present for three years, during which time she suffered with periodic acute episodes such as this one. In this same period of time she underwent several hospitalizations and surgical procedures. On one occasion she had been referred to a teaching centre for evaluation and bacteriologic studies which proved negative.

Examination of the mouth revealed the dentition to be in good repair except for the absence of the lower left posterior teeth which were replaced with a removable denture. The partial denture seemed to fit well and was not in hyperocclusion. No abnormality of the soft tissues could be noted. Examination of the neck elicited no abnormal findings. No abnormality could be found upon routine x-ray examination.

Since thyroiditis can cause a pain of this nature along the inferior border of the mandible, the patient was placed on empirical antibiotic therapy and referred to her family physician for evaluation, and returned with a result of normal thyroid function. At this time, all previous records and radiographs were reviewed. Since the results of this review led to the diagnosis of the etiology of the pain, the review will be presented in some detail as the chronology of events is important.

About three years before, she had developed a pericoronitis around the lower left third molar which was removed by her dentist. The surgery was complicated by an osteitis which was treated with analgesics. After several days of therapy without relief of pain, she was sent to an oral surgeon who removed the adjacent second molar. A few weeks later with no improvement, the first molar was removed and the edentulous area curetted. The pain continued and she was referred to a teaching centre where the area in question was explored and cultures taken. These were found to demonstrate normal flora of the mouth and subsequent cultures affirmed this result. After several weeks, she returned to her dentist with a report that there was no evidence

of osteomyelitis. Over the next two and one-half years she was hospitalized on several occasions for surgical procedures on the left mandible which finally eliminated the remaining bicuspid teeth. A partial denture was inserted to prevent joint pain from the lack of posterior dental support.

The diagnosis was now established as surgical neuropathy of the third division of the fifth cranial nerve, secondary to an osteitis and multiple surgical insults. Since the condition had been established for such a long time, there appeared to be no hope for resolution and the patient was offered repeated alcohol injections or neurectomy to relieve the pain. She declined both on the grounds that since she now understood the problem she could live with it.

Discussion

In recent years, drugs have become an important part of the culture of North America, almost to the level of legal drug abuse. Dentists must recognize the fact that many patients who present for treatment may be taking a prescription drug to combat some form of tension. Unless the practitioner is cognizant of this, he cannot render scientific therapy to his patients.

Drug induced neuropathy demonstrates graphically the need to obtain a complete drug history to include the investigation of possible adverse side effects. This is especially true in those cases presenting with pain and no obvious organic cause.

In the case presented of surgical neuropathy we have a classic situation of surgical panic in lieu of scientific diagnosis. Other than the offending third molar which was removed at the onset of the problem, all other surgery was probably needless. At the time of the original surgery the patient was taking oral contraceptives and this was not recorded as part of the drug history. It is now becoming more recognized that these agents may affect healing of wounds. In the case of the third molar surgery on the lower jaw, it is the author's experience that women taking oral contraceptive drugs have a three times greater risk of developing "dry socket" than those who are not taking the drug. A study of 200 cases is now in preparation.

In order to protect themselves and their patients, dentists must recognize the fact that they must elucidate what drugs their patients are taking and what possible adverse side effects can be encountered.

Dr. Wallace is a practising oral surgeon. His address is 1849 Yonge Street, Toronto, Ont.

1 Alling, Charles C. Facial pain. Philadelphia. Lea & Febiger, 1968.

2 Physician's Desk Reference. Ed 26, 1972.

Instructions to Contributors

The Journal of the Canadian Dental Association is currently soliciting research and clinical articles for publication. Interested contributors are asked to use the following outline of requirements when preparing manuscripts.

Manuscripts: Manuscripts should be submitted to the editor with a covering letter requesting consideration for publication in the Journal. Send two copies — original and a carbon — typewritten with all material (text, quotations, tables, legends, references, etc.) double-spaced, on one side of the sheet, $8\frac{1}{2} \times 11$ inches, with ample margins on all four sides. The author should always retain a carbon copy of material submitted. Every article should contain a summary of the contents.

Original articles are considered and accepted subject to the understanding that they are submitted solely to this Journal, and will not be reprinted without the consent of both the editor and the author.

The editor reserves the right to fit articles within the space available and to make usual editorial alterations in manuscripts; these include such changes as are necessary to ensure correctness of grammar and spelling, clarification of obscurities or conformity to Journal style. In no case will major changes be made without prior consultation with the author. The senior author will receive either the edited manuscript or galley proofs for checking prior to publication.

Article Titles Make article titles descriptive but as concise as possible. Long titles discourage reading, present

typographical and layout problems and create difficulties in library indexing.

References: Authors should limit references to published work to the minimum necessary for guidance to readers wishing to study the subject further. They should not quote articles they have never seen. Except in review articles, the maximum number of references should not be more than 25. References should be numbered in the text and should be set out in a separate numbered list at the end of the article.

For journal references, give the author's name, article title, journal name, volume number, first page of article, and year of publication:

1. Gibb, G. H. Methods of achieving improved amalgam restorations. *J Canad Dent Ass* 30:413, 1964.

For books give the author's name, book title, location and name of publisher, year of publication:

2. Kilpatrick, H. C. Work simplification in dentistry. Ed. 2. Philadelphia, Saunders, 1964.

Illustrations: Line and halftone illustrations should be of high quality for satisfactory reproduction.

Photographs — Handle photographs carefully. Do not bend, fold or use paper-clips. Photographs should be unmounted, untrimmed, good, sharp, black and white glossy prints, preferably not larger than 10×8 inches. Color work can only be published at the author's expense. Magnification of photomicrographs must always be given. Photographs must not be written on or typed on. On the back of each photograph, very lightly and in pencil, write the author's name, the figure number and indicate the top edge. If a

figure contains two or more photographs, do not mount the parts; on the back of each photograph write very lightly in pencil the figure number and part letter (Figure 1a, etc.) and indicate the top edge. Patients must not be recognizable unless the written consent of the subject to publication has been obtained.

Drawings — Figures, graphs, charts and diagrams should be drawn and lettered in india ink. Lettering must be large enough to be read after the drawings are reduced to column width (small, simple drawings) or page width (larger, more complex drawings).

Legends — Figure legends should be typed as a group on a separate sheet. They should be separate from the text of the article and from the illustrations.

Tables: Each table should be typed on a separate sheet. Tables should be numbered consecutively and tailored to fit within column width or page width. Table title and table footnotes should be on the same page with the table. Do not show vertical rules in tables.

Permission and Waivers: These should accompany the manuscript when it is submitted for publication. Permission of author and publisher must be obtained for the direct use of material (text, photos, drawings) under copyright that is not your own. Up to one hundred words of prose material usually can be quoted without getting permission, provided the material quoted is not the essence of the complete work. Waivers must also be obtained for the publication of photographs showing persons, unless faces are masked to prevent identification. Waiver forms are available from the editor.

AN IN VITRO ASSESSMENT OF ORAL PROPHYLAXIS PROCEDURES.

A SCANNING ELECTRON MICROSCOPY STUDY

K. A. Galil, DDS, Dip Oral Surg, PhD
London, Ont.

A scanning electron microscopic investigation was carried out to assess the effectiveness of dental office polishing procedures in removing plaque. It was shown that polishing procedures were able to remove plaque completely except in the depth of the fissures. It was observed that residual particles of the polishing material remain in and around the fissures in spite of water rinsing after polishing. The material could be removed by an additional polishing with brush and water only. It is suggested that this final step might be a relevant addition to current polishing procedures.

Oral prophylaxis with cleaning and polishing procedures in the dental office is well known to improve oral health in both children and adults. Studies using disclosing solutions have indicated the effectiveness of the procedures in the removal of pigmented pellicle, dental plaque and calculus. Disclosing solutions may only be a rough guide to the removal of accumulations on teeth, since a previous study by Galil¹ using the scanning electron microscope has shown that plaque removal with normal brushing is not as complete as might be indicated by simple disclosing staining. This study, therefore, was carried out to assess the efficacy of cleaning and polishing as performed in the dental office using scanning electron microscopic observations. The study also deals with the fate of residual particles of the polishing agents.

Materials and methods

One hundred and forty extracted human teeth were used. They were mainly molars and premolars. All the teeth had brown stain and plaque material.

Each tooth was initially stained in a disclosing solution (Dis-plaque, Pace Maker Corp., Oregon), then thoroughly scaled and rinsed with water. The teeth were then divided into 14 groups of 10 teeth each. Two groups were used as controls. Regions chosen for study were the approximal and occlusal areas.

Two powder, two paste and two prophylactic pastes were

used. These are all commercially available brands. The powder abrasives were formulated by the addition of water to form a pasty mass. Each polishing agent was applied to two groups of teeth. In one group the bristle wheel brush was used and in the other the rubber cup was used. Polishing agents were not used on the two control groups which were treated with the bristle brush and water alone or with the rubber cup and water alone. At the conclusion of the polishing period the teeth were rinsed thoroughly in water. The specimens were then examined with a stereo light microscope (Zeiss) to assess the amount of residual plaque. For the examination by the scanning electron microscope the critical point drying technique² was used. The samples were then mounted on a stud, shadowed with gold palladium and examined in a Hitachi HHS 2R scanning electron microscope.

After observations on the 14 groups of teeth had been made, an additional treatment using the bristle wheel brush and water only was carried out on each group of teeth. These specimens were also examined with stereo light microscopy and the scanning electron microscope.

Results

Polishing agents removed plaque material existing on inclined cuspal planes and approximal surfaces, but a small amount of plaque material was left in the depth of the fissure. By contrast, the control group showed minimal removal of plaque material on all surfaces. There was no significant difference between the effectiveness of any of the six polishing agents in their ability to remove plaque nor did it matter whether the agents were applied with a bristle wheel brush or a flexible rubber cup (Table 1). Following the use of each polishing agent, the teeth showed residual particles, which were observed to be located on residual plaque material in the depth of the fissure and wedged between the fissure opening and the enamel wall (Figs 1 and 2). The amount of particles present depended on the agents used, and the largest number were found to be present after the use of powder polishing substances (Fig 3). Following an additional treatment with the brush and water alone, the

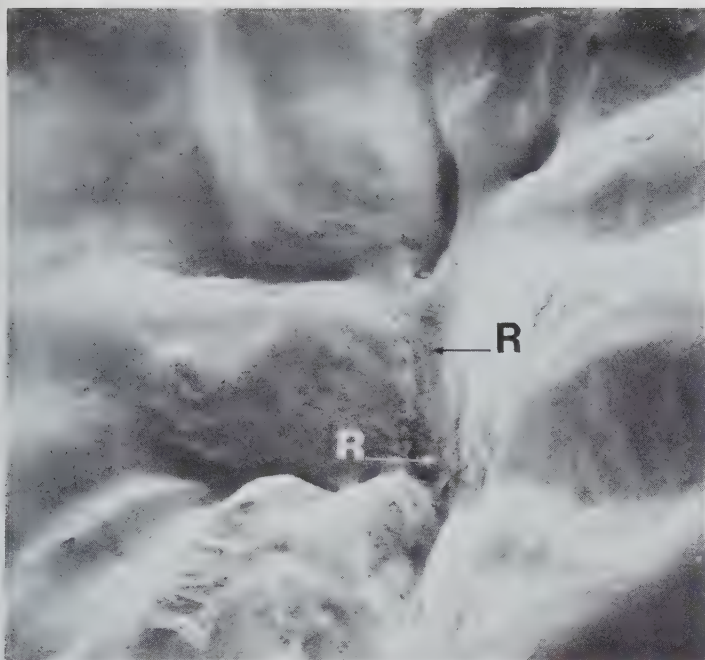


Fig 1 A scanning electron micrograph showing the occlusal surface of an upper molar after the use of a polishing paste. Notice the persistence of remnants of the polishing agent (R). $\times 40$

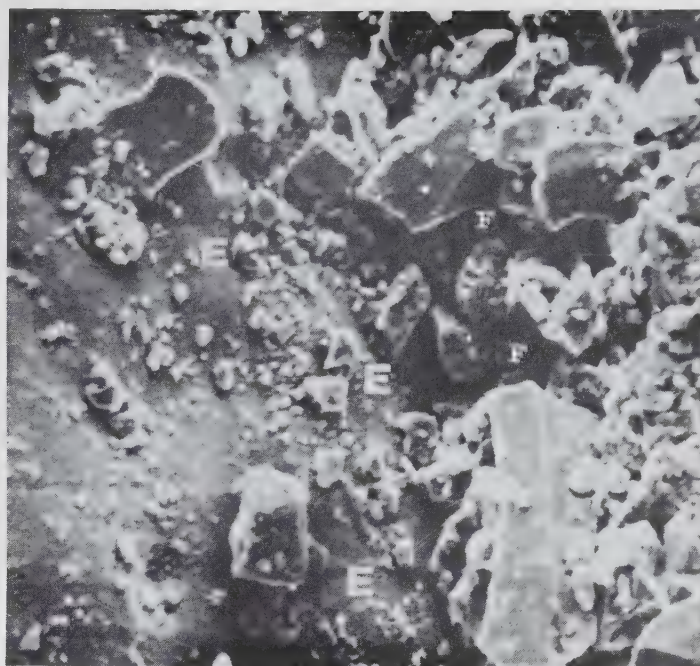


Fig 2 A scanning electron micrograph demonstrating a high magnification of the polishing agent particles lodged between enamel wall (E) and the fissure (F). $\times 4000$

Persistence of plaque and residual particles following polishing procedures

Table 1

Treatment	Site							
	Occlusal				Extra treatment with brush and water for pits and fissures of all groups			
	Proximal		Inclined planes		Pit and fissure			
	Residual particles	plaque	Residual particles	plaque	Residual particles	plaque	Residual particles	plaque
Brushed + powder	—	—	—	—	+	+	—	+
Rubber cup + powder	—	—	—	—	+	+	—	+
Brushed + paste	—	—	—	—	+	+	—	+
Rubber cup + paste	—	—	—	—	+	+	—	+
Brushed + prophy. paste	—	—	—	—	+	+	—	+
Rubber cup + prophy. paste	—	—	—	—	+	+	—	+
Brush + water (control)	n.a.	+	n.a.	+	n.a.	+	n.a.	+
Rubber cup + water (control)	n.a.	+	n.a.	+	n.a.	+	n.a.	+

— indicates removal of the material
 + Indicates presence of the material
 n.a. Means not applicable

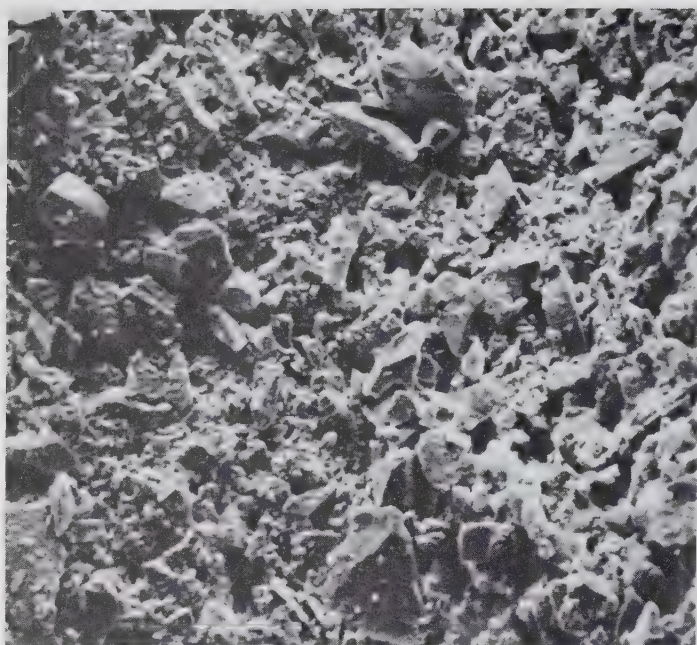


Fig 3 A scanning electron micrograph exhibiting the particles of a powder polishing agent in a fissure. $\times 2000$

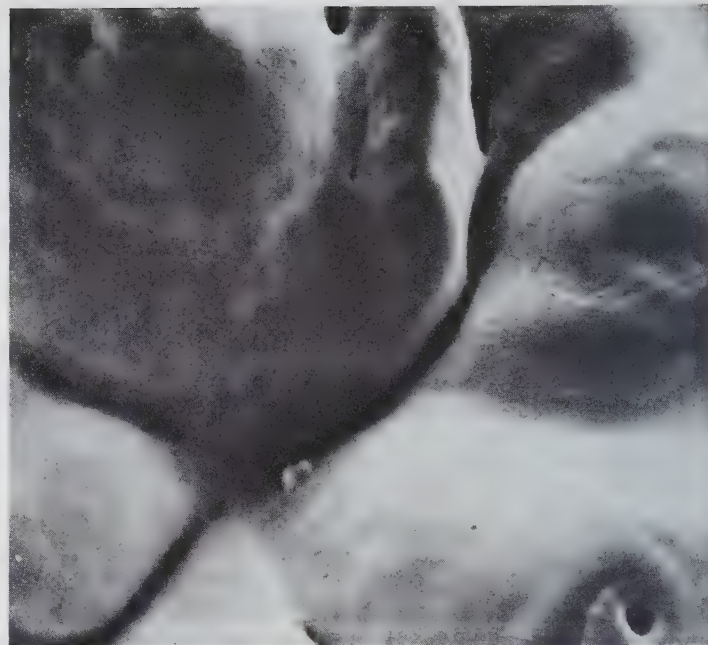


Fig 4 A scanning electron micrograph of an occlusal area which has been subjected to an extra treatment with brush and water for 30 seconds after polishing. Notice that no polishing agent particles are present. $\times 40$

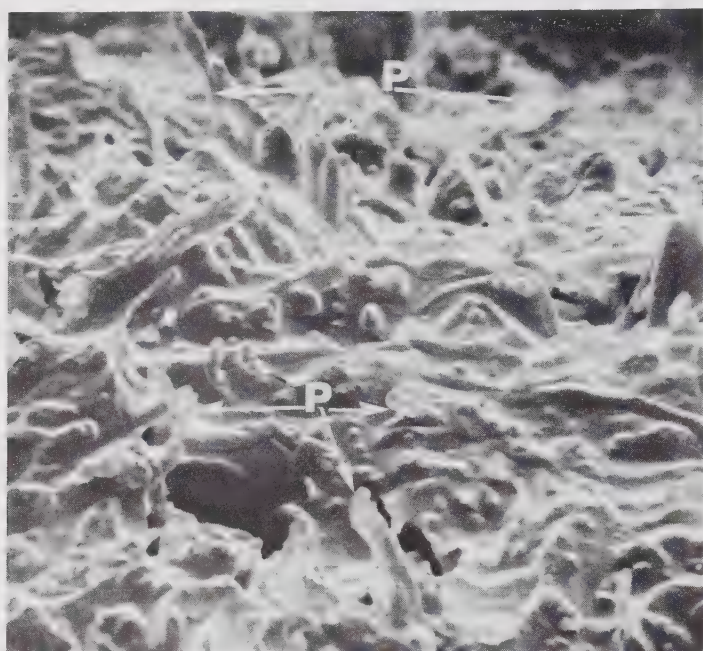


Fig 5 High magnification of the fissure area observed in Fig 4. Notice the total absence of any active particles. Only bacterial plaque (P) material is left in the fissure. $\times 4000$

residual particles were completely removed leaving the residual plaque material visible in the depth of the fissure (Figs 4 and 5).

Discussion

Polishing pastes and prophylactic pastes are used as a part of oral prophylaxis.³⁻⁶ There is no evidence in the literature to suggest any difference in the ability to remove plaque between powder, paste and prophylactic paste and this is borne out by the detailed observations of the scanning electron microscopy made in this study. It was rather striking, however, that so much plaque material remained in the con-

trol group, indicating that the abrasive nature of the polishing agent plays a much greater role than the mechanical action of cleaning instruments. In a previous study on tooth brushing using the scanning and transmission electron microscope,¹ it was observed that a certain amount of plaque consisting of dextran-like substance and a high percentage of matrix substance persisted on the inclined planes and around the fissures even after brushing. By contrast, the present study has shown that the plaque can be completely removed except in the depth of the fissure. Although the *in vitro* situation provides better access for polishing, especially on the approximal surfaces, there is no doubt that the results give a good indication of the effectiveness of dental office polishing procedures over routine daily brushing.

An interesting aspect of the dental office polishing procedure, not previously dealt with in the literature, is the persistence of residual particles of polishing material on the tooth after cleaning and rinsing with water. These tended to be located in and around the fissures and could be removed with an additional cleaning, using the bristle wheel brush and water alone for 30 seconds.

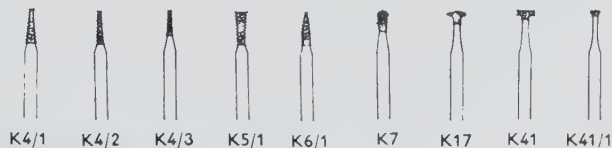
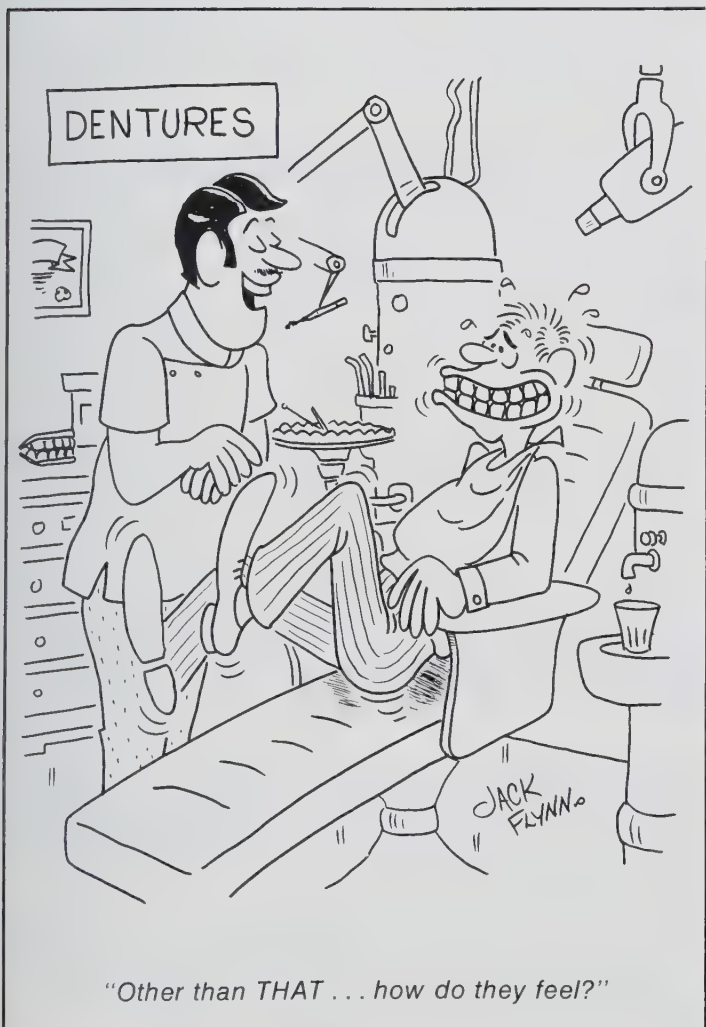
The observations on the control group showed that brushing with water cannot be relied on as a means of cleaning and polishing, and that abrasive particles are important in the process. The observation of abrasive particles lodged in the pits and fissures following all the experiments is proof that polishing agent material is capable of being left in the fissure. Although there are no studies in the literature on the effect of these materials in humans, one should not ignore the fact that they may be harmful if dislodged and swallowed during food ingestion. Also, the retention of these particles could have a definite relationship to pit and fissure sealant success or failure. Furthermore, the results obtained with a brief additional brushing treatment showed that the

active particles were easily removed. This should encourage dentists to try to eliminate the active particles which persist after the usual polishing procedure and water rinsing routine by an additional brief brushing.

The author expresses appreciation to Dr. K. McCully for critically reviewing this article, and to Mr. P. Ohara for the technical assistance in using the scanning electron microscope. Thanks are also due to Dr. W. J. Dunn, Dean of the Faculty of Dentistry at the University of Western Ontario, for his support.

Dr. Galil is associate professor in the Department of Anatomy, University of Western Ontario, London, Ontario.

- 1 Galil, K. A. Scanning and transmission electron microscopic examination of occlusal plaque following tooth brushing. J Canad Dent Ass 41:499, 1975.
- 2 Cohen, A. L., Marlow, D. P. and Gardner, G. E. A rapid critical point method using fluorocarbons (freons) as intermediate and transitional fluids. J Microscopie 7:331, 1968.
- 3 Goldman, H. M. and Cohen, D. W. Periodontal therapy. Ed. 5. St. Louis. Mosby, 1968.
- 4 Handleman, S. L. and Hess, C. Effect of dental prophylaxis on tooth surface flora. J Dent Res 49:340, 1970.
- 5 Van Huysen, G. and Boyd, T. Cleaning effectiveness of dentifrices. J Dent Res 31:575, 1952.
- 6 Jefopoulos, T. Dentifrices. Ed. 1. New Jersey, Noyes Data Corporation, 1970.

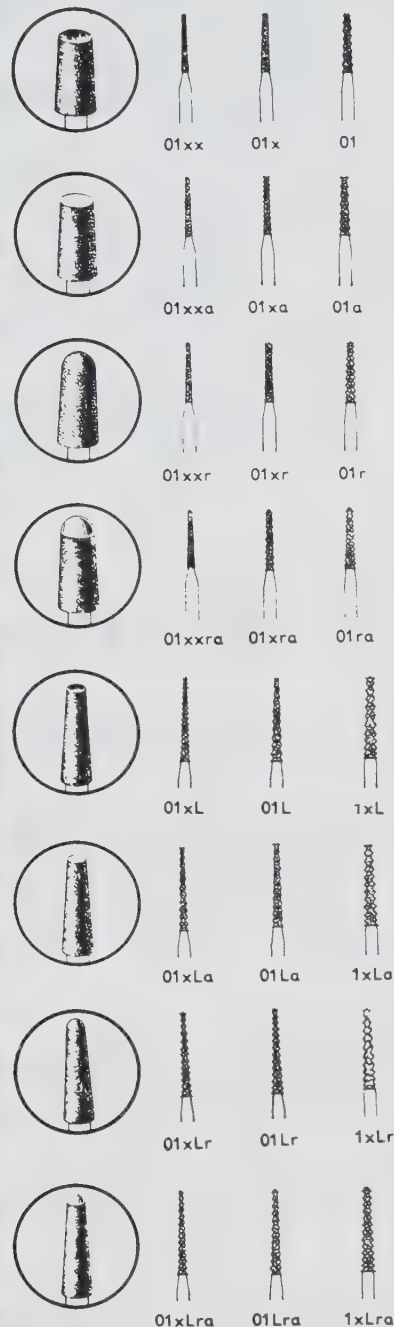


HORICO

**DIAMOND
INSTRUMENTS**

THESE, AND MANY MORE

Write for Catalog No. 143



PFINGST & COMPANY, INC.
62 COOPER SQ. NEW YORK, N. Y. 10003

CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE.

Direct advertising copy to:
Marie Cosgrave, Classified Advertising Manager,
Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6,
Telephone: (613) 523-1770.

CLASSIFIED ADVERTISING RATES

(Per Insertion Per Issue):

Minimum (50 words or less)	\$15.00
Each additional word	.30
Service charge for C.D.A. Box No.	2.00

DISPLAY CLASSIFIED ADVERTISING RATES:

Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

OFFICES AND PRACTICES

PHYSICIAN'S PLACEMENT CENTRE. Dentists are invited to use our matching services. We do have several requests for qualified dentists in various parts of Canada. Write to: Physician Placement Centre Ltd., Lafleche, Saskatchewan S0H 2K0. Phone: (306) 472-3104.

BRITISH COLUMBIA — Grand Forks. Office space for lease in a new 2,400 sq. ft. clinic. Two fully equipped modern operatories, Nitrous Oxide, Panarex, Audio Visual and Home Care rooms, etc. Will be sharing clinic with another dentist. Waiting room and reception area will be shared. Just step right in and begin your practice, with no worries about equipment or patients. Contact: Dr. Mark O'Neill, Box 1120, Grand Forks, B.C. V0H 1H0. Phone: (604) 442-2177.

BRITISH COLUMBIA — Terrace (North-west). For sale. Large well established preventive oriented practice. Three operatories, a staff room and doctor's private office. Modern equipment to utilize four-handed dentistry. Ideal starter practice. Reasonably priced. Contact: Dr. L. J. Talarico, 4546 #10, Park Ave., Terrace, B.C. V8G 1V4.

BRITISH COLUMBIA — Abbotsford. Dental office for rent in modern professional building in Abbotsford, adjacent to hospital. Panoramic view. Apply: McCallum Terrance Holdings, 2151 McCallum Rd., Abbotsford, B.C. V2S 3N8.

BRITISH COLUMBIA — Victoria. Dental building for sale in downtown Victoria. Five operatories, lab, waiting room, two reception areas, dark room, private office. 1,150 sq. ft. adjoining space (private entrance) rented on one year lease. Five parking spaces in rear of building. Practising owner would consider renting space or associating. Reply to CDA Box Number 1716.

ALBERTA — Calgary. For Sale: Calgary practice with high gross. Three fully equipped operatories with modern equipment. Space for fourth operator. Reply to CDA Box Number 1662.

ALBERTA — Calgary. Seven-year-old, two-man, quality practice in desirable north-west area. Modern, one-year-old office in new professional building. Seven operatories, four fully equipped, three complete except for chair and unit. Suitable for one to three dentists. Apply: Box 10, Site 23, RR 2, Calgary, Alta. T2P 2G5. Phone: (403) 286-5030.

ALBERTA — Elk Point. Twenty-year-old "rural" practice for sale in small north-eastern Alberta town, 700 sq. ft. office with three operatories. Hospital privileges, high gross, low overhead. Excellent opportunity for immediate take over. Ideal outdoor recreation area with lakes and hunting. No cash outlay required. Reply to CDA Box Number 1692.

ONTARIO — Burlington. Family practice for sale. Two years old, with first rate furnishings and equipment, including analgesia, automatic film processor. Carpeting, air-conditioning. Located in a small plaza in an upper income residential area. Owner moving to U.S.A. Please reply to CDA Box Number 1714.

ONTARIO — Cannington. Golden opportunity awaits any dentist setting up practice in Cannington, 70 miles north-east of Toronto. Rapidly developing small town of 1,500. Local hospital privileges. New medical center with spacious fully serviced dental suite. Present part-time dentist leaving to concentrate on his city practice but might sell some equipment. Reply to Box 370, Cannington, Ontario L0E 1E0. Phone: (705) 432-2569.

ONTARIO — Hawkesbury. Space for rent in newly constructed commercial center on Main St. in Hawkesbury. Four stores fronting Main St. and eight units at the rear at street level through an eight-foot arcade corridor. Available in areas of 600 sq. ft. or more. Accessible from street or entrance from parking lot for 160 cars. Dentists urgently required in this area. Apply to: Assaly Realities of Hawkesbury, 129 Main St. E., Hawkesbury, Ont. Phone: (613) 632-2719.

ONTARIO — Kincardine. Busy general practice for sale. One room equipped, two others ready for equipment, about 1,000 sq. ft. Price includes building with two bedroom apartment. Equipment is on lease. Growing community on Lake Huron. Please apply to: Box 68, Kincardine, Ont.

ONTARIO — London. Practice for sale or lease in north-east section. Four operatories, open concept, in Medical Clinic. Phone: Dr. P. Hough (519) 455-7650.

ONTARIO — Ottawa. Associateship or Sale: This is a busy well established practice situated in downtown Ottawa in modern professional building. Ideal opportunity for dentist who wishes to relocate, or recent graduate. Reply to CDA Box Number 1696.

ONTARIO — Ottawa. Beautiful new building, ideal for dental practice. Location: 305 Presland Ave., Ottawa. High residential area. Private parking. Apply within, or phone (613) 745-8359.

ONTARIO — Ottawa. Established professional buildings located in south central commercial-residential district on public transport routes, close to medical and hospital facilities. All building services provided. One existing dental office includes partitioning, plumbing, lab, and washroom. Available immediately. Professional management by Riverside Terrace (Ottawa) Ltd. Leasing enquiries, phone: (613) 232-7361.

ONTARIO — Ottawa. Family practice established 10 years. Present dentist wishes to relocate in Western Canada. Small well located office with or without equipment. Flexible and reasonable. Reply to CDA Box Number 1711.

ONTARIO — Tilburg. Dentist required to take over very busy town practice, established five years in custom built office, located 30 miles from Windsor, Ontario. Full book provided. Only purchase necessary is for dental equipment and supplies. Owner relocating in west. Phone: (519) 682-0766. Evenings.

ONTARIO — Toronto. Lease with option to purchase well established centrally located practice. Suitable for one or two experienced dentists or specialists. Crown and bridge above average. Three operatories. Low general overheads. Air-conditioned modern building. Own convenient parking. Capital outlay spread over extended period. Available on agreement. Please reply to CDA Box Number 1713.

ONTARIO — Town of Smooth Rock Falls. Dentist required. 700-800 sq. ft. rent-free dental building available, including plumbing and wiring for two operatories, lab, dark room, waiting room and private office. Town population 3,000 — no dentist within a 35 mile radius. Underserved area with guarantee. For full details write to: Town Clerk, Smooth Rock Falls, or phone: (705) 338-4355.

QUEBEC — Montreal. Quartier ouest. Pratique générale et préventive établie depuis quatre années. Quatre salles opératoires, deux entièrement équipées. Occasion unique pour un ou deux dentistes. Mille pieds carrés, laboratoire commercial voisin. Revenu brut annuel approchant cent mille dollars. Le propriétaire se spécialise. Casier A.D.S. no: 1709.

ASSOCIATESHIP AVAILABLE

BRITISH COLUMBIA — Fernie. Full-time associate required with option to buy in about a year. Contact: Dr. R. H. Campbell, Box 130, Fernie, B.C.

BRITISH COLUMBIA — Revelstoke. Associate required for unique community oriented dental practice. Ideal situation for new or recent graduate. Serving 10,000 in the heart of mountains. Financial arrangements negotiable. N.D.E.B. licensing requirement. Contact: Dr. Reuben B. Tataryn, R.D.H.S., Dental Health Services, P.O. Box 174, Revelstoke, B.C.

BRITISH COLUMBIA — Vancouver. Associate required for Vancouver area to replace dentist on vacation from November 1, 1977, until April 30, 1978. Modern group practice enjoying all aspects of preventive dentistry. Experience required. House also available for rent if desired. Please contact: Dr. G. B. Remocker, 4587 E. Hastings St., N. Burnaby, B.C. V5C 2K3.

BRITISH COLUMBIA — Vancouver Island. Nanaimo dentist requires associate on expense sharing basis, in downtown office. There are the equivalent of one-and-a-half rooms, but lots of work. Available beginning of July 1977. Write to: Dr. L. Lewis, 170 Wallace St., Nanaimo, B.C., or phone: (604) 753-4711.

BRITISH COLUMBIA — Victoria. Young, associate dentist required. Four-chair modern operatories. Strictly Medical-Dental building (opposite Jubilee General Hospital). General anaesthesia privileges. Family-oriented practice. No capital outlay. Reply: Dr. B. Rauch, 310 - 1900 Richmond Ave., Victoria, B.C. V8R 4R2.

SASKATCHEWAN — Saskatoon. Full-time associate required in a busy high gross family practice. Two fully modern operatories available to associate in five-chair office. Possibility of purchase or partnership. Modern, air-conditioned Medical-Dental Building. Contact: Dr. R. E. Dickson, 621 Medical Arts Building, Saskatoon, Sask. S7K 3H3. Home phone: 653-3173.

ONTARIO — Toronto. Associateship available in north Toronto. Busy full-time, ideal for new graduate wishing to practise general dentistry. No investment necessary. Initial salary plus percentage. Future group partnership for compatible individual. Contact: Dr. O. R. Spork or Dr. D. E. Desmond, 1849 Yonge St., Suite 215, Toronto, Ont. M4S 1Y2. Phone: (416) 485-6866.

OPPORTUNITIES AVAILABLE

BRITISH COLUMBIA — Vancouver (Burnaby). Hygienist required for a group practice in Burnaby (near Vancouver). Modern office and excellent working conditions. Interest and enthusiasm in Prevention Program is important. Salary according to experience and qualifications. Please contact: Dr. Remocker, 4587 East Hastings St., Burnaby B.C., or phone: (604) 291-6696.

ALBERTA — Athabasca. Athabasca Health Unit requires two Dental Auxiliary-Hygienists and one Dental Assistant. Salary in accordance with qualifications and experience, as per the Athabasca Health Unit salary schedule. Please submit applications to: Mrs. Star Vanstone, Director, Box 1140, Athabasca, Alta. T0G 0B0. Phone: 675-2231.

ONTARIO — Dental Underserved Areas. The Ontario Ministry of Health offers financial support for dentists to establish practices in designated underserved dental areas. Locations are available throughout Ontario. Incentive grants, payable over four years, are \$18,000 in Northern Ontario and \$14,000 in Southern Ontario. Alternatively, a guaranteed net professional income of \$28,000 per annum is offered in Northern Ontario. A limited number of salaried positions are open on mobile dental coaches. Apply to: Dental Officer, Program for Underserved Areas, 7 Overlea Blvd., Toronto M4H 1A9. Phone: (416) 965-5036.

ONTARIO — Hamilton. Dental Hygienist wanted. Excellent opportunity for involvement in a preventive oriented practice. Terms of employment open to discussion. Office presently employs a preventive therapist, two chairside assistants, and one receptionist. Reply to CDA Box Number 1717.

ONTARIO — Midland. Dental Hygienist required for full-time position in busy preventive-oriented practice. Modern office. Please apply to: Dr. J. B. Gibson, Box 577, Midland, Ont. L4R 2A1.

ONTARIO — Timmins. Hygienist required for modern six operator practice serving two dentists in northern Ontario. Starting September 1977. For further information please call collect: (705) 267-3900.

AUSTRALIA — Melbourne. The Royal Dental Hospital of Melbourne — Head of Orthodontia Department: Applications are invited from dentists whose qualifications are registrable in the State of Victoria for the position of Head of the Orthodontia Department. A higher degree of qualification in orthodontics is essential. Duties include the responsibility for administering the Department, both in relation to staff and patient care. The appointee will be required to participate in the clinical teaching of undergraduate and graduate students subject to appointment by the University of Melbourne and approval by the Hospital Council. The Orthodontic Department houses both the hospital and university orthodontic activities and close liaison with the appropriate university staff in the area would be expected of the Appointee. Salary will be at the rate of \$28,818.40 per annum. Superannuation is available and other conditions of employment are as prescribed in the Determination of the Hospital Dental Officers' Wages Board. Application forms and other information are available from: The Dental Director, The Royal Dental Hospital of Melbourne, 711 Elizabeth St., Melbourne, Australia 3000, with whom applications close on Friday, 30th September, 1977.

ASSOCIATESHIP WANTED

BRITISH COLUMBIA — Vancouver. Young experienced dentist, British and Canadian graduate, seeks associateship in progressive preventive practice with possible view to partnership. Available early in 1978. Please reply to CDA Box Number 1715.

OPPORTUNITY WANTED

BRITISH DENTAL SURGEON, B.D.S., eight years qualified, seeks opportunity to practise conscientious dentistry, preferably in Manitoba, but other areas actively considered. Reply to CDA Box Number 1718.

MISCELLANEOUS

BOOKKEEPING SERVICE: Escape the drudgery of office work! I offer a complete general accounting service, including the set-up and continued maintenance of a simple yet complete system, from accounts receivable, payables to trial balance. Contact: Ruth Balsam, 506 - 120 Shelbourne Ave., Toronto, Ont. M6B 2M7. Phone: 781-5062.

EQUIPMENT

FOR SALE or take over lease. All equipment needed to set up an efficient operator: Dental-eze chair VS II—light blue; Ritter motor base; Castle light; one Midwest 210 unit—light blue, plus headpieces — for central suction or AVS; Siemens Heliodent x-ray wall mount; A-Dec. nitrous oxide unit plus all tubing and gear; four Cooke Waite aspirator syringes — 2.2 ml; two AVS suction units. Please phone or write: Dr. A. vanHoek, 2, 372 Coronation Ave., Duncan, B.C. V9L 2T3. Phone: 746-6533.

Acupuncture Foundation of Canada Examination in Acupuncture

The Acupuncture Foundation of Canada announces its first Examination in Acupuncture for Physicians and Dentists to be held

October 3, 1977, in Toronto

Chief Examiner: Joseph Wong, M.D., F.R.C.P.(C)

Eligibility: Licenced Physicians and Dentists with 100 hours of approved training.

Fee: Members of the A.F.C. \$200.00
Non-Members \$250.00

To be paid on, or before, Sept. 1, 1977

For information send inquiry to: **Joan Adams, Acupuncture Foundation of Canada, 10 St. Mary Street, #503, Toronto, Ontario, M4Y 1P9. Phone: (416) 931-4131**

**ST. CLAIR COLLEGE OF
APPLIED ARTS & TECHNOLOGY**
requires a
**CHAIRMAN,
DENTAL HEALTH SCIENCES
(D.D.S.)**

Reporting to the Dean of the School of Health Sciences, the incumbent will be responsible for the overall management and administration of the Dental Health Sciences section in the School of Health Sciences to ensure that appropriate instruction is provided for the Dental Assistant Program and Dental Hygiene Program; and to ensure that the St. Clair College Dental Hygiene Clinic functions in the best interests of the College and the community.

The successful applicant will be responsible for the ongoing administration of the 17-chair active treatment Dental Hygiene Clinic.

Salary is commensurate with qualifications and experience.

Starting date is as soon as possible.

Qualifications: Registered or eligible for Registration in the Province of Ontario.

Apply in writing to: **Personnel Services
St. Clair College of Applied Arts
and Technology
200 Talbot Road
Windsor, Ontario N9A 6S4**

"AN EQUAL OPPORTUNITY EMPLOYER"

**FACULTY OF DENTISTRY
UNIVERSITY OF BRITISH COLUMBIA**

Fixed Prosthodontics

Applications are invited for a full-time teaching position in Fixed Prosthodontics. Candidates should have completed an accredited graduate or certification programme and be eligible for licensure in the Province of British Columbia.

Salary and rank are negotiable according to qualifications and experience.

Applications accompanied by curriculum vitae should be sent to:

**Dr. T. J. Harrop, Head
Department of Restorative Dentistry
Faculty of Dentistry
University of British Columbia
2075 Wesbrook Place
Vancouver, Canada V6T 1W5**

ADVERTISERS' INDEX

Astra Pharmaceuticals (Canada) Ltd.	IBC
The L. D. Caulk Co. of Canada	359,360
Colgate Palmolive Ltd.	348
Commerce Drug	363
Denco	352
Dentsply International	OBC,344,350
Charles E. Frosst	354
Nobilium	357
Ordont Laboratories	347
Pfingst	373
Procter and Gamble	343
Siemens Electric	IFC
Weil Dental	358

Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.

**Director of Accreditation
Canadian Dental
Association**

The Canadian Dental Association requires a dentist, preferably bilingual to act as the Director of Accreditation.

He will be responsible for the organization of all surveys of Dental Undergraduate and Dental Specialty Programmes, Dental Assistants and Dental Hygienists' Programmes.

The position is at the C.D.A. National Headquarters in Ottawa and the successful applicant will be required to live in Ottawa.

The candidates for this position are probably already involved in Dental Education in Canada. The salary will be comparable to an academic's salary and is subject to negotiation.

Please forward applications to:

**L. A. Stevenson, Executive Director
Canadian Dental Association
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6**

REGISTRATION FORM

5 TH ANNUAL
WORLD DENTAL CONGRESS
FEDERATION
DENTAIRE INTERNATIONALE



TORONTO
CANADA

22-28
OCTOBER
1977

For advance registration return one copy with appropriate fees before
September 14, 1977; otherwise register at Congress.

Return to: 1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario, M5W 1X3
CANADA.

PLEASE TYPE OR USE BLOCK LETTERS; WHERE APPLICABLE CIRCLE APPROPRIATE RESPONSE

SURNAME: DENTAL LIBRARY INITIALS: _____ Prof./Dr./Mr./Mrs./Miss
ADDRESS: 124 EDWARD ST.,
TORONTO 2

COUNTRY: _____ Language for documents: English / French / German / Spanish

FDI MEMBERSHIP:

Are you a supporting member of the FDI YES/NO

MEMBERSHIP REGISTRATIONS

F.D.I. Supporting Member — \$100 before or \$120 after July 1 —————→ \$ _____

Canadian Dental Association (Non FDI) Member \$115 before or \$130 after July 1 —————→ \$ _____

ADDITIONAL REGISTRATIONS (\$10 each; no fee for spouse or other family member)

REGISTRANT: _____ SURNAME: _____ INITIALS: _____

Spouse: DENTAL LIBRARY —————→ \$ _____

Family member: 124 EDWARD ST., —————→ \$ _____

Auxiliary: TORONTO 2 —————→ \$ _____

Student: _____ —————→ \$ _____

MILITARY PERSONNEL ONLY

Rank: _____

Attending Military Conference and Field Visit to Base Borden — on Thurs., October 20 YES/NO accompanied YES/NO

SOCIAL PROGRAM

Congress Ball — Tues., October 25..... (\$30. per person; limited attendance) —————→ \$ _____

Canadian Hoedown — Fun Night - Wed., October 26..... (\$15. per person) —————→ \$ _____

LADIES PROGRAM

Fashion Show and Luncheon — Mon., October 24..... (\$12.50 per person) —————→ \$ _____

Sightseeing Tours — English Commentary

Toronto City — mornings — specify day..... Mon./Tues./Wed./Thurs.

(\$6 per person) —————→ \$ _____

Toronto City and Harbour (bus and boat) — mornings — specify day..... Mon./Tues./Wed./Thurs.

(\$7 per person) —————→ \$ _____

Niagara Falls — all day — specify day..... Mon./Tues./Wed./Thurs.

(\$22 per person including lunch) —————→ \$ _____

McMichael Canadian Art Gallery — 5 hours..... Tues., October 25

(\$12 per person including lunch) —————→ \$ _____

Antique — all day..... Thurs., October 27

(\$19 per person including lunch) —————→ \$ _____

TOTAL FEES (CANADIAN \$ ONLY) —————→ \$ _____

MAKE CHEQUES OR MONEY ORDERS PAYABLE TO FDI/CDA WORLD DENTAL CONGRESS

CANCELLATION CLAUSE

Ten per cent will be deducted from registration fees of registrants cancelling up to two months before the Congress and 20 per cent from those cancelling up to one month before the meeting. Money paid for social events by those not attending the meeting will be repaid in full. Money will not be refunded for tickets which cannot be resold during the Congress.

PRE AND POST CONGRESS TOURS

If you are interested in detailed information concerning Pre and Post Convention tours, please check here ☐

SIGNATURE _____ DATE _____

**65ème CONGRES
DENTAIRE MONDIAL ANNUEL
FEDERATION
DENTAIRE INTERNATIONALE**



**TORONTO
CANADA**

du 22 au
OCTOB
1977

Pour s'inscrire à l'avance, veuillez renvoyer un exemplaire avec le montant exact des droits au plus tard le 14 septembre 1977; après cette date, il faut s'inscrire pendant le Congrès.

Renvoyer à: 1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A,
Toronto, Ontario, M5W 1X3
CANADA.

VEUILLEZ DACTYLOGRAPHIER OU UTILISER DES LETTRES MAJUSCULES; SI NECESSAIRE VEUILLEZ ENTOURER LA REPONSE CORRECTE.

NOM _____ INITIALES _____ Prof./Dr./M./Mme/Melle _____

ADRESSE **DENTAL LIBRARY** _____

**124 EDWARD ST.
TORONTO 2**

PAYS _____ Langue pour les documents: Allemand / Anglais / Français / Espagnol

MEMBRE DE LA FDI:

Etes-vous membre sympathisant de la FDI _____ OUI/NON

INSCRIPTIONS DES MEMBRES

Membre sympathisant de la FDI — \$100 avant le 1er juillet et \$120 après _____ \$

Membre de l'Association Dentaire canadienne (non FDI) \$115 avant le 1er juillet ou \$130 après _____ \$

INSCRIPTIONS SUPPLEMENTAIRES (\$10 chacune: gratuit pour les époux (ses) autres membres de la famille)

PARTICIPANT NOM: INITIALES

Epoux(se): _____ \$

Membre de la famille: _____ \$

Auxiliaire: _____ \$

Etudiant: _____ \$

PERSONNEL MILITAIRE UNIQUEMENT

Grade: _____

Assistera à la Conférence Militaire et la visite à la Base Borden — le jeudi 20 octobre OUI/NON accompagné OUI/NON

PROGRAMMES DES FESTIVITES

Bal du Congrès — Mardi 25 octobre. (\$30 par personne; participation limitée) _____ \$

Canadian Hoedown — "Nuit de rigolades" — Mercredi 26 octobre (\$15 par personne) _____ \$

PROGRAMME DES DAMES

Défilé de modes et déjeuner — Lundi 24 octobre (\$12.50 par personne) _____ \$

Visites guidées — commentaires en anglais

Cité de Toronto — matinées — préciser le jour. lun./mar./mer./jeudi
(\$6 par personne) _____ \$

Cité et port de Toronto (autobus et bateau) — matinées — préciser le jour. lun./mar./mer./jeudi
(\$7 par personne) _____ \$

Chutes du Niagara — toute la journée — préciser le jour lun./mar./mer./jeudi
(\$22 par personne, déjeuner compris) _____ \$

Galleries d'art canadien McMichael — 5 heures. mardi 25 octobre
(\$12 par personne, déjeuner compris) _____ \$

Antiquités — toute la journée jeudi 27 octobre
(\$19 par personne, déjeuner compris) _____ \$

**MONTANT TOTAL (\$ CANADIENS
UNIQUEMENT)** _____ \$

ADRESSER LES CHEQUES OU LES MANDATS DE PAIEMENT A L'ORDRE DE FDI/CDA WORLD DENTAL CONGRESS

CLAUDE D'ANNULATION

On déduira dix pour cent des droits d'inscription des participants qui annuleront deux mois, au moins, avant le Congrès et 20 pour cent des droits d'inscription pour ceux qui annuleront un mois, au moins, avant la session. On remboursera à ceux qui n'auront pas assisté au Congrès la totalité des sommes versées pour le programme des festivités. On ne remboursera pas toutefois le prix des billets qui n'auraient pu être revendus pendant le Congrès.

VISITES ANTERIEURES ET POSTERIEURES AU CONGRES

Si vous désirez recevoir des renseignements détaillés sur les visites antérieures et postérieures au Congrès, veuillez faire une marque ici ☐

SIGNATURE _____ DATE _____

HOTEL RESERVATION FORM

35 TH ANNUAL
WORLD DENTAL CONGRESS
FEDERATION
DENTAIRE INTERNATIONALE



TORONTO
CANADA

22-28
OCTOBER
1977

One copy to be returned with appropriate fees and the registration form before September 14, 1977 to:-

1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario M5W 1X3
Canada

For room reservations, please print or type three choices

1st DENTAL LIBRARY
2nd 124 EDWARD ST.
3rd TORONTO 2

Please enter my reservations at the above hotel for:

Singles ☐ @ \$ _____ Twin/
Doubles ☐ @ \$ _____ Suites
1 Bdrm. ☐ @ \$ _____ 2 Bdrm. ☐ @ \$ _____

If rate requested is not available, the next highest will be assigned.

Please DO NOT send your request directly to the HOTEL;
it WILL ONLY DELAY your confirmation. Please allow
two - three weeks to receive confirmation.

Room will be occupied by: (please print or type)

Name DENTAL LIBRARY
Street 124 EDWARD ST.
City TORONTO 2 State _____ Zip _____

Additional Occupants _____

Date Arriving _____ AM
PM _____ Departing

THE DEADLINE FOR MAKING ADVANCE RESERVA-
TIONS IS SEPTEMBER 14, 1977.

Hotel	Single	Double/Twin	1-Bed Suite	2-Bed Suite
1. Royal York (Hdqs.)	\$35	\$45	\$70 - \$135 (Studio suites \$60 - \$70)	
2. Sheraton Centre	\$33 \$38 \$43 (Cabanas \$59)	\$40 \$47 \$52	\$85 to \$153 (Hosp. Suites \$163 to \$203)	\$128 to \$196
3. Harbour Castle Hilton	\$35	\$42	\$70 - \$95	\$137
4. King Edward	\$20	\$24 \$26	\$38	\$70
5. Lord Simcoe	\$20	\$25		
6. Hotel Toronto	\$35	\$45	\$92 \$102 Add \$10 for double occupancy	\$132 \$152
7. Holiday Inn Toronto Downtown	\$30	\$39 \$42		
8. Bond Place	\$20	\$24		
9. Chelsea Inn	\$25	\$29		
10. Carlton Inn	\$17	\$21		
11. The Westbury	\$29.50	\$36.50		
12. Sutton Place	\$36.50	\$44.50		
13. Town Inn	\$29	\$34		
14. Park Plaza	\$34	\$38		
15. Hyatt Regency	\$38	\$45		
16. Hotel Plaza II	\$28	\$35	(Suites upon request \$75 - \$250)	
17. Inn On The Park	\$38	\$46		
18. Prince	\$34	\$40		
19. Holiday Inn Don Valley	\$32	\$42		
20. Ramada Inn - Toronto	\$29.50	\$36.50		
21. Bristol Place	\$33.50	\$35.50		
22. Cara Inn	\$28	\$35		
23. Constellation	\$34	\$42		
24. Skyline	\$30	\$36		
25. Toronto Airport Hilton	\$29 - \$37	\$37 - \$45		

Each of the above rates is quoted in Canadian Currency. Ontario sales tax - 7% not included.

WE STRONGLY URGE THAT YOU MAKE YOUR HOUSING RESERVATIONS EARLY, PARTICULARLY IF YOU PLAN TO ARRIVE ON SATURDAY. STATISTICS FROM THE TORONTO TOURIST INDUSTRY INDICATE A HEAVY INFLUX ON OCTOBER WEEKENDS.

(Please make all changes and cancellations in writing directly to the Organizing Committee).

Note: FDI business meetings and a portion of the scientific program will take place at the Royal York Hotel. The Dental Trade Show and other portions of the scientific program will take place at the Automotive Building, Exhibition Place.

FORMULAIRE DE RESERVATION DES CHAMBRES D'HOTEL

**65ème CONGRES
DENTAIRE MONDIAL ANNUEL
FEDERATION
DENTAIRE INTERNATIONALE**



**TORONTO
CANADA**

du 22 au 28
OCTOBRE
1977

Prière de renvoyer un exemplaire avec le montant exact des droits et le bulletin d'inscription au plus tard le 14 septembre 1977 à l'adresse suivante:

1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A,
Toronto, Ontario M5W 1X3
CANADA

Pour les chambres d'hôtel, veuillez indiquer trois possibilités
(écrire ou dactylographier)

1er _____

2ème _____

3ème _____

Veuillez me réserver à l'hôtel ci-dessus de(s) chambre(s):

Individuelle(s) à lits jumeaux/
lit double Suite(s)
1 Ch. 2 Ch.

☐ @ \$ _____ ☐ @ \$ _____ ☐ @ \$ _____ ☐ @ \$ _____

Si le tarif demandé ne peut être offert, le tarif immédiatement supérieur sera attribué.

Veuillez **NE PAS** envoyer votre réservation directement à l'HOTEL; cela **NE FERA QUE RETARDER** votre confirmation. Veuillez compter deux à trois semaines avant de recevoir votre confirmation.

La chambre sera occupée par (veuillez écrire ou dactylographier).

Nom _____

Rue _____

Ville _____ Etat _____ Code postal _____

Autres occupants _____

Date d'arrivée _____ AM
PM _____

date de départ

LES RESERVATIONS NE SERONT PLUS ACCEPTÉES APRÈS
LE 14 SEPTEMBRE 1977.

Hôtel	Indiv.	L.jumeaux/ L. doubles	Suites 1 Ch.	Suites 2 Ch.
1. Royal York (Sec.G1.)	\$35	\$45	\$70 - \$135 (suites studio \$60 - \$70)	
2. Sheraton Centre	\$33 \$38 \$43 (Cabanas \$59)	\$40 \$47 \$52	\$85 à \$153 \$128 à \$196 (Suites Hosp. \$163 à \$203)	
3. Harbour Castle Hilton	\$35	\$42	\$70 - \$95	\$137
4. King Edward	\$20	\$24 - \$26	\$38	\$70
5. Lord Simcoe	\$20	\$25		
6. Hotel Toronto	\$35	\$45	\$92 \$102	\$132 \$152 Ajouter \$10 pour deux occupants
7. Holiday Inn Toronto Downtown	\$30	\$39 \$42		
8. Bond Place	\$20	\$24		
9. Chelsea Inn	\$25	\$29		
10. Carlton Inn	\$17	\$21		
11. The Westbury	\$29.50	\$36.50		
12. Sutton Place	\$36.50	\$44.50		
13. Town Inn	\$29	\$34		
14. Park Plaza	\$34	\$38		
15. Hyatt Regency	\$38	\$45		
16. Hotel Plaza II	\$28	\$35	(Suites sur demande \$75 - \$250)	
17. Inn On The Park	\$38	\$46		
18. Prince	\$34	\$40		
19. Holiday Inn Don Valley	\$32	\$42		
20. Ramada Inn - Toronto	\$29.50	\$36.50		
21. Bristol Place	\$33.50	\$35.50		
22. Cara Inn	\$28	\$35		
23. Constellation	\$34	\$42		
24. Skyline	\$30	\$36		
25. Toronto Airport Hilton	\$29 - \$37	\$37 - \$45		

Les tarifs ci-dessus sont indiqués en devises canadiennes. La taxe l'Ontario sur les ventes de 7% n'est pas comprise dans les prix

NOUS VOUS RECOMMANDONS VIVEMENT DE FAIRE VOS RESERVATIONS DE CHAMBRES D'HOTEL ASSEZ TOT, EN PARTICULIER SI VOUS AVEZ L'INTENTION D'ARRIVER UN SAMEDI. LES STATISTIQUES, FOURNIES PAR L'INDUSTRIE TOURISTIQUE DE TORONTO INDIQUENT UNE AFFLUENCE IMPORTANTE PENDANT LES WEEK-ENDS D'OCTOBRE.

(Veuillez procéder à tous les changements et annulations, en écrivant directement au Comité d'organisation.)

Note: Les réunions administratives de la FDI et une partie du programme scientifique se dérouleront au Royal York Hotel. L'exposition de l'industrie dentaire et l'autre partie du programme scientifique se tiendront à l'Automotive Building, Exhibition Place.



If you think waiting for anesthesia onset is hard on you, think what it's like for him.

The more you had to ask "Feel anything?" the more convinced your patient got that he was going to.

So another piece of dentistry got off to a tense start.

For both of you.

And that's why Astra Canada developed Citanest Forte for routine

ASTRA

Mississauga, Ontario

dentistry. It's fast. It's effective. Yet doesn't take all morning to wear off.

Citanest Forte from Astra. In the handy Kleen Pak.

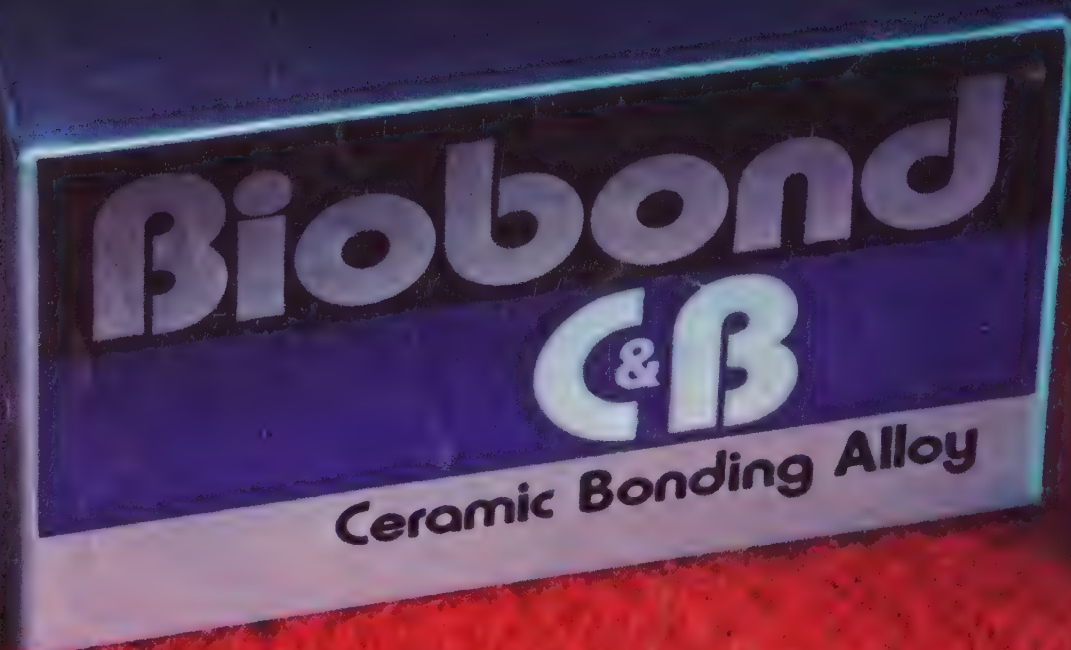
It's making dentistry a whole lot easier for patients.

And a whole lot easier for you.



Citanest[®] FORTE

Now...from Dentsply...



The new premium non-precious alloy for
porcelain and plastic veneer restorations.
Available now from your dental laboratory.

Write for complete information.

DENTSPLY™



Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1977 Dentsply International Inc.
All rights reserved.

DENTAL JOURNAL DENTAIRE

Si non livrable
au destinataire
**RETOURNER A
L'EXPEDITEUR**
Part payé

A
If Undeliverable
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed

Sept 1977/Volume 43/No 9

Canadian Dental Association/Association Dentaire Canadienne



65th ANNUAL WORLD DENTAL CONGRESS
65ème CONGRES DENTAIRE MONDIAL
OCTOBER/OCTOBRE 22-28, 1977

U.O.T. LIBRARY
SERIALS DEPT.
TORONTO ONT
M5S 1A5

21

SIEMENS

Now we have it for you...

Efficiency, convenience, flexibility and comfort — your practice requires the maximum of each. From an awareness of your requirements Siemens has designed the ultimate patient chair and instrument delivery system.

SL3 Patient Chair

- harmonious in form and function with flexible positioning and easy controls.
- designed for the comfort of both doctor and patient.

S5 Instrument Delivery System

- compact and easily adjustable to your working posture, standing or sitting.
- modular system permits you to select the instrumentation package you need.
- instruments are always accessible and easy to reach.



SL3 Patient Chair

S5 Instrument Delivery System

For further information contact your dealer; or write or call Siemens Electric Limited
George Grignon
7300 Trans-Canada Highway
P.O. Box 7300 Pointe Claire
Quebec H9R 4R6
Tel.: (514) 695-7300

Prevention between visits



Brushing and flossing. Good diet. And CREST.

The at-home contribution to preventive dentistry between professional visits.

CREST has the actual research and recognition of effectiveness.

In fact, CREST has more extensive research than any other fluoride dentifrice, and the only clinical research to prove *added* anticaries protection... over and above the protection provided by office-applied fluorides. Give your patients MORE protection... recommend clinically proven, clinically tested CREST.



"Crest has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."— Canadian Dental Association.



Leadership in research=Confidence in Crest

©1976 PROCTER & GAMBLE TORONTO CAS 381



**Now there are three Dentsply® Cavitron® Units.
They have their differences.
What they have in common is their uncommonly
gentle and efficient prophylaxis.**

*Ask your preferred
Dentsply dealer.*

"CAVITRON", "POWERMATIC" and "SEVENTY SIX"
are trademarks of Cavitron Corporation.

© 1977 Dentsply International, Inc.
All rights reserved.

**DENTSPLY
Equipment**

D Dentsply International,
York, PA



These Dentsply-Cavitron Ultrasonic
Scaling Devices are Acceptable for
use in scaling and cleaning surfaces
of teeth in conjunction with other
suitable prophylactic measures.

PUBLISHER/Canadian Dental Association
SCIENTIFIC EDITOR/R. S. Turnbull, DDS
EDITOR/Diane Charter
FRENCH SCIENTIFIC EDITOR/Robert Lambert, DDS

MANAGING EDITOR/ADVERTISING/Anna Spencer
EDITORIAL SECRETARY/Mary Maxwell
CLASSIFIED ADVERTISING/Marie Cosgrave
CIRCULATION/Cathy Cronin

ISSN 0382-8514

Editorial

A dental convention with a difference — Opportunity or responsibility?	392
---	-----

Regular Features

Announcements	384
Letters to the editor	388
Viewpoint	396
Dentistry in the news	402
Deaths	404
FDI/CDA Congress News	412
Les actualités dentaires	424

Articles

Consequences de la politique gouvernementale sur les curriculums des facultés dentaires — Simard	430
CDA Council for Dental Materials and Devices Status report: High copper amalgams	437
An aggressive central giant cell granuloma of the maxilla — Scholfield and Holmes	440
Ankylosis with and without oligodontia: Report of seven cases — Ruprecht and Wright	444

Classified advertising	449
------------------------	-----

Advertisers' index	454
--------------------	-----

Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1977 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454.

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association.

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1977 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22).

Veillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences. Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise.

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Canadian Dental Association

1977, Toronto, October 22-28

1978, Winnipeg, September 10-13

Fédération Dentaire Internationale 65th Annual World Dental Congress

1977, Toronto, October 22-28

FDI/CDA Congress Office: P.O. Box 6423, Terminal A, Toronto, Ontario M5W 1X3

Canadian Meetings

Canadian Academy of Restorative Dentistry, Annual Meeting, Park Plaza Hotel, Toronto, October 19-21, 1977, just prior to the FDI World Dental Congress. Contact: Dr. D. B. McAdam, Associate Professor, Department of Restorative Dentistry, University of Toronto, 124 Edward St., Toronto, Ontario M5G 1G6.

Canadian Association of Orthodontists, Annual Meeting, Hyatt Regency Hotel, Toronto, October 20-23, 1977, just prior to the FDI World Dental Congress. Contact: Dr. J. Schachter, P.O. Box 952, Saskatoon, Saskatchewan S7K 3M4.

Canadian Society of Public Health Dentists, Annual Meeting, Sheraton Centre, Toronto, October 23, 1977, in conjunction with the FDI World Dental Congress. Contact: Dr. D. Lewis, Faculty of Dentistry, University of Toronto, 124 Edward St., Toronto, Ontario M5G 1G6.

Canadian Academy of Oral Radiology, Annual Meeting, Sheraton Centre, Toronto, October 23, 1977, in conjunction with the FDI World Dental Congress. Contact: Dr. D. W. Stoneman, Faculty of Dentistry, University of Toronto, 124 Edward St., Toronto, M5G 1G6, or Dr. Carl Hawrish, 5064 Dentistry Pharmacy Centre, University of Alberta, Edmonton, T6G 2H7.

Canadian Dental Hygienists Association, Annual Meeting, Bond Hotel, Toronto, October 23-27, 1977, in conjunction with the FDI World Dental Congress.

Canadian Dental Nurses and Assistants Association, Annual Meeting, Holiday Inn, Civic Square, Toronto, October 23-27, 1977, in conjunction with the FDI World Dental Congress.

Canadian Society of Oral Surgeons, Annual Convention, Hyatt Regency Hotel, Toronto, October 28-31, 1977, following the FDI World Dental Congress. Contact: Dr. W. Prusin, Convention Chairman, 919 Ellesmere Rd., Scarborough, Ontario M1P 2W7.

Royal College of Dentists of Canada, Medical Sciences Auditorium, University of Toronto, October 29, 1977, following the FDI World Dental Congress.

Canadian Academy of Endodontics, Annual Meeting, Hyatt Regency Hotel, Toronto, October 29-30, 1977, following the FDI World Dental Congress. Contact: Dr. J. M. Phillips, 12½ Simcoe St. South, Oshawa, Ontario L1H 4G2.

Canadian Society of Forensic Science, Odontological Section, Chateau Lacombe, Edmonton, November 3-5, 1977. Contact: Dr. R. B. J. Dorion, Suite 710-D, Sun Life Building, Montreal, Quebec H3B 2V6.

Ontario Society of Clinical Hypnosis, Two Workshops to run concurrently, Royal York Hotel, Toronto, November 11-13, 1977. (1) Introduction to clinical hypnosis; (2) Practical therapeutic applications of hypnosis. Contact: Dr. Alan Banack, OSCH, 243 St. Clair Ave. West, Toronto, Ontario M4V 1R3. Phone: (416) 922-8300.

Montreal Dental Club Pre-Convention Seminar, Queen Elizabeth Hotel, Montreal, November 12-13, 1977. Contact: Miss M. Komarnicka, 55 LaFleur St., Ville La Salle, Quebec H8R 3G7.

Montreal Dental Club Fall Clinic, Queen Elizabeth Hotel, Montreal, November 14-16, 1977. Contact: Miss M. Komarnicka, 55 LaFleur St., Ville La Salle, Quebec H8R 3G7.

Academy of Dentistry, Winter Clinic, Royal York Hotel, Toronto, November 24, 1977. Contact: Mrs. P. Williams, Executive Secretary, Academy of Dentistry, 234 St. George St., Toronto, Ontario M5R 2P2.

Ontario Dental Association and Dental Society of the State of New York, Joint Convention, Sheraton Centre, Toronto, May 14-17, 1978. Contact: Mrs. W. C. Durham, 234 St. George Street, Toronto, Ontario M5R 2P2.

Les Journées Dentaires du Québec, Quebec Hilton Hotel, Quebec City, May 28-31, 1978. Contact: Dr. R. M. Lang, 5171 Decarie Blvd., Montreal, Quebec H3W 3C2.

Pacific Dental Federation Convention, Vancouver, July 23-26, 1978. Contact: Dr. Ken Neuman, President, Pacific Dental Federation, 1125 West 8th Avenue, Vancouver, British Columbia V6H 3N4.

International Meetings

American Academy of Periodontology, 63rd Annual Session, Sheraton-Boston Hotel, Boston, Massachusetts, October 5-8, 1977. Contact: American Academy of Periodontology, 211 East Chicago Ave., Room 924, Chicago, Illinois 60611.

PERMLASTIC

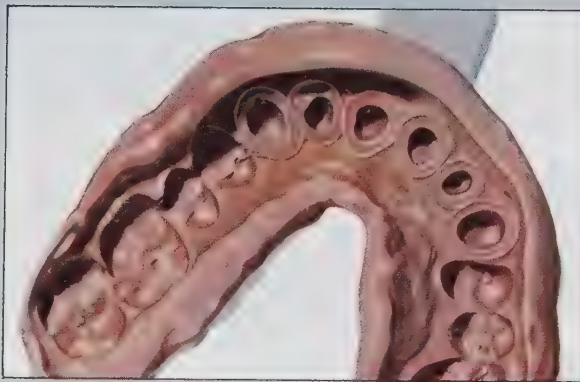
Actual Permlastic Impression

The Standard for Accuracy...from Kerr

For nearly 25 years Permlastic polysulfide-based impression material has proven its clinical accuracy in impressions of every kind. It reproduces extremely fine detail and provides excellent dimensional stability. You can be confident the finished restoration will fit the preparation as well as the die.

Permlastic comes in four viscosities to meet your every need. All are compatible, bond perfectly and can be built up. Permlastic is tough and elastic, won't break or tear, even with severe undercuts. Permlastic follows through, producing accurate models and permlastic can be plated if desired.

Make a great impression with Permlastic! Ask your Kerr Dealer for additional information.



SYBRON | **Kerr**



“...but
if you feel
any pain,
take one or two
® 222 * tablets.”

Not every patient needs an analgesic after dental care — but some do, even though you have done everything possible to avoid any patient discomfort.

When a patient is in pain, or when there is a possibility that pain will occur later, suggest ® 222 * tablets.

222 * is a reliable analgesic — you and your patient can depend on it.

INDICATIONS: For relief of mild to moderate pain, fever and inflammation as in influenza, common cold, low back and neck pain, headache, trauma, following dental and surgical procedures.

DOSAGE: Adults — 1 or 2 tablets one to three times daily; Children's dosage, when recommended by a physician: 10 to 14 years, one tablet, one to three times daily; 5 to 10 years, one-half tablet, one to three times daily.

CONTRAINDICATIONS: Gastrointestinal ulceration and sensitivity to any of the components.

WARNINGS: Salicylates increase the effects of anticoagulants. Caution is necessary when salicylates and anticoagulants are prescribed concurrently. Also, salicylates may depress the concentration of prothrombin in the plasma. Large doses of salicylates may affect insulin requirements of diabetics. Salicylates may potentiate sulfonylurea hypoglycemic agents. Analgesic abuse (excessive and prolonged therapy) has been associated with nephropathy. TO AVOID

ACCIDENTAL POISONING ACETYL SALICYLIC ACID PREPARATIONS MUST BE KEPT WELL OUT OF REACH OF CHILDREN.

PRECAUTIONS: Give with caution to patients with asthma, other allergic conditions, bleeding tendencies, or hypoprotrombinemia. Salicylates can produce changes in thyroid function tests.

Observe care in use of codeine, although tolerance and addiction are rare. Give codeine with caution to patients with severe respiratory depression. Its depressant effect may be enhanced by concurrent administration of sedatives and tranquilizers.

ADVERSE REACTIONS: Acetylsalicylic acid: *Gastrointestinal:* dyspepsia, heartburn, nausea, vomiting, diarrhea, gastrointestinal ulceration and bleeding. *Ear reactions:* tinnitus, hearing loss. *Hematologic:* anemia, leukopenia, thrombocytopenia, purpura. *Dermatologic and Hypersensitivity:* urticaria, angioedema, pruritus, various skin eruptions, asthma and anaphylaxis. *Miscellaneous:* mental confusion, drowsiness, sweating and thirst.

Codeine: Average or large doses may cause various gastrointestinal symptoms such as nausea, vomiting and constipation.

Caffeine: May cause nausea, nervousness, insomnia, headache, vomiting, palpitation, vertigo, muscle tremor, sensory disturbances, excessive diuresis in sensitive patients. Large doses may cause gastric ulceration.

FULL INFORMATION AVAILABLE ON REQUEST

HOW SUPPLIED

® 222* Tablets — White, scored, engraved 222 on one side. Each tablet contains: acetylsalicylic acid 375 mg, caffeine citrate 30 mg, codeine phosphate 8 mg. Available in tubes of 12; bottles of 40 and 100; also bottles of 60 with safety cap.

*Trademark



(MC-390a)

Frosst
FOUNDED IN CANADA IN 1899
CHARLES E. FROSST & CO
KIRKLAND (MONTREAL) CANADA

Association of American Women Dentists, 56th Annual Meeting, Deauville Hotel, Miami Beach, Florida, October 9-10, 1977. Contact: Dr. A. Carole Pratt, 254 West Main St., P.O. Box 947, Dublin, Virginia 24084.

American Dental Association, 118th Annual Session, Miami Beach Convention Centre, Florida, October 9-13, 1977. Contact: American Dental Association, 211 East Chicago Ave., Chicago, Illinois 60611.

Society for Clinical and Experimental Hypnosis, 29th Annual Workshop and Scientific Program, Hyatt House Hotel, Los Angeles, October 11-16, 1977. Contact: Mrs. Marion Kenn, Administrative Director, SCEH, 129A Kings Park Drive, Liverpool, New York 13088.

American Society of Clinical Hypnosis, Annual Workshop and Scientific Meeting, Omni International Hotel, Atlanta, Georgia, October 16-22, 1977. Contact: William E. Hoffman Jr., Executive Director, Suite 218, 2400 East Devon Ave., Des Plaines, Illinois 60018.

International Prosthodontic Congress, Las Vegas Hilton Hotel, Las Vegas, Nevada, October 18-22, 1977. Contact: American Prosthodontic Society, Suite 2108, 919 North Michigan Ave., Chicago, Illinois 60611.

Fédération Dentaire Internationale, 65th Annual World Dental Congress, Toronto, October 22-28, 1977. Contact: FCI/CDA Congress Office, P.O. Box 6423, Terminal A, Toronto, Ontario M5W 1X3.

Winter Medical-Dental Assembly, New Stanley Hotel, Nairobi, Kenya, East Africa, October 28 - November 18, 1977. Contact: Dr. Anthony T. Wachna, North American Chairman, 504 Medical Arts Building, Windsor, Ontario N9A 4J9. Phone: (519) 253-9393.

American Institute of Oral Biology, 34th Annual Meeting, Spa Hotel, Palm Springs, California, November 4-8,

1977. Contact: Executive Secretary, P.O. Box 481, South Laguna, California 92677.

French Dental Association, 1977 National Congress, Congress Hall, International Centre in Paris, November 23-26, 1977. Contact: Alain Deyrolle, Secretary General, French Dental

Association, 19 bis, rue Legendre, 75017 Paris.

11th International Dental Trade Fair, Bella Center, Copenhagen, Denmark, January 3-5, 1978. Contact: Royal Danish Consulate, 151 Bloor St. West, Suite 310, Toronto, Ontario M5S 1S4.

Roads Scholar

Ever noticed how informed and informative your Denco man seems to be? Could be he's a very bright guy. But then, it could have a lot to do with Denco's "College of Applied Dental Product Studies" too.

No snickers, please. Denco takes professional training programs seriously . . . including the continuous upgrading of personnel in the latest developments in dental practices, procedures, products, techniques and trends. The same goes for the importance of maintaining high standards of "professionalism", "personal service" and "follow through".

How else could we have fielded a team who respond so well to each dentist's professional needs.

Speak to your Denco man. He knows his business . . . and yours.



DENCO

LETTERS TO THE EDITOR

Western Canada Dental Convention

I believe all my colleagues from Ontario who attended the Western Canada Dental Convention in Banff join me in a great big THANK YOU to our Western Colleagues who put on such a superb convention. Work and play were justly balanced in gorgeous surroundings, the famous Western hospitality showed everywhere and a good clean aura of prevention hovered clearly over the whole affair. I hope all the participants took even a little bit of that aura and hung it over their own practices.

The one little sour note, which hopefully is now cleared up anyway, was a hygienists' table clinic on Tuesday afternoon, that promoted honey as a sweetener instead of sucrose. As we all know, the only difference lies in the ability to form plaque, but once even a little plaque is present, honey is even more cariogenic than sucrose. The information dispensed was obtained at a nutritionists' meeting, which points out that instead of accepting another science's views unquestioningly, we should also inform them about our side of the story.

In Toronto, it has been our custom now for a number of years that a guest lecturer from the Faculty of Dentistry, Department of Preventive Dentistry, gives guest lectures (or has given the necessary information) to many other departments of health sciences (e.g. Food Sciences, Nursing, Home Economics, etc.), explaining the modern idea of preventive dentistry and particularly the role nutrition plays in it. We were not invited — we invited ourselves and found that we were very

welcome! It has been a gratifying experience for both sides and is being repeated constantly. The results already show in the first crops of young hospital dietitians and their comprehension of a really healthy diet.

Maybe something similar is already happening in the West; if not, here is the idea!

M. Truuvert, DDS, DPaed
Assistant Professor
Department of Preventive Dentistry
University of Toronto

Pulpal response to cavity treatment

The article by Beagrie and Brännström (May, 1977) on pulpal response mentions the use of Tubulicid Red in a research situation. Brännström and others have written elsewhere on the use of this material in clinical situations.

Following one such report in the *Journal of Operative Dentistry* (1976), I obtained some Tubulicid Red from a local dealer and began to use it according to instructions. I quickly discovered that while it was indeed an excellent cavity cleanser, it invariably left treated teeth extremely hypersensitive to cold. Even when used on very small buccal or occlusal pit cavities, which are washed and then sealed with copalite, the pain was sufficiently intense as to necessitate retreatment of some cases, and to cause the loss of some patients from my practice! Treatment with daily 0.5 per cent NaF rinses was usually able to

overcome sensitivity in 3 to 12 weeks. Another material which is well known and very effective for cavity cleansing is Lorvic CPC, a dilute solution of EDTAC. Results were similar.

Having discarded both of these otherwise efficient solutions, I now treat the cut surfaces of posterior teeth with Caulk 30 per cent stannous fluoride for one minute, wash and lightly dry the cavity, and coat with Copalite varnish. Sensitivity after this treatment is practically unknown.

Roel J. Wyman, DDS
7084 Airport Rd.,
Mississauga, Ontario

Why Research?

My comments regard the article "Why Research?" by G. S. Beagrie published in your July issue.

I am a layman and, like Dr. Beagrie, I expect all dentists to be researchers. For research is the attitude of challenging axioms, and I expect my dentist to realize that pragmatic axioms are sooner acquired than scrutinized. A dentist learns from others and establishes for himself a working set of habits which are the tools of his profession. But any man who would pride himself as a tool-maker must seek out and sharpen the dull edge. The IADR attends to the edge of global dentistry. No less honed an edge do I deserve on the smaller tool applied to me.

Tony Kudron,
77 Quebec Ave., Apt. 1425,
Toronto, Ontario



Two of your best weapons for fighting tooth hypersensitivity

The 2-second test and Sensodyne®

A survey of dentists indicates that tooth hypersensitivity can be found in every seventh patient in the average general practice.¹ But there may be many other undiagnosed patients who don't complain because they consider it "normal" or unimportant. So they may suffer in silence, risking the possibility of more serious pathology.

Tooth hypersensitivity vs. preventive home care

Patients with sensitive teeth tend to avoid brushing sensitive areas.¹ "This appears to be related to the fear of causing pain . . . with the toothbrush."² And when, for any reason, "toothbrushing is stopped and the bacterial mass (within the plaque) is allowed to accumulate . . . clinical signs of gingival inflammation become apparent."³

A 2-second test for tooth hypersensitivity

That's why diagnostic testing for hypersensitivity — before gingival involvement — is so important. A 2-second jet of cold air or water, or contact with an explorer, will — in the absence of caries or other pathology — usually elicit an involuntary painful response if sensitivity is present.

Treatment is often simple and effective

Fortunately, home treatment with SENSODYNE is highly effective. Used daily in place of a regular dentifrice, SENSODYNE brings substantial relief for up to 90 percent of patients and with good to complete remission of painful response in four out of five patients. And SENSODYNE can help restore the plaque-control benefits that come with routine brushing.

References: 1. Data on file, Block Drug Company, Inc. 2. Abstract of the Symposium on Mechanisms of Pain and Sensitivity in the Teeth and Supporting Tissues, Fairleigh Dickinson University School of Dentistry, Nov. 12-13, 1973, p. 15. 3. Goldman, H. M. and Cohen, D. W.: An Introduction to Periodontia, Fourth Edition, The C. V. Mosby Company, St. Louis, 1969, p. 74.

Sensodyne®



Professional Division
Block Drug Company (Canada) Limited
36 Northline Rd., Toronto, Ontario M4B 3E3
Quality products for Dental Health



I+II=1



Two centers of operation.
One operating environment.

a bicentric system from Pelton & Crane

Maximum mobility. Maximum flexibility. Complete stability. These are the characteristics of Centric I and Centric II. In combination with Pelton & Crane's Chairman, these two units produce an operating environment of maximum efficiency. For two or four-handed dentistry.



centric I

- Slim, trim design. Adapts to the Chairman chair, including those presently in use.
- Mounted to the chair — moves up and down with it, or independently.
- Two recessed trays. Four-handpiece capacity with unique electronic controls.
- The Silver Dollar foot control replaces many standard manual controls with a simple touch of the toe.
- Control panel has air pressure gauge, x-ray viewer, call button, chip air and master switch.
- Lightweight Aspiring combines vacuum and 3-way syringe.



centric II

- Versatile assistant module meets the needs of 4-handed dentistry. Stores and puts a variety of instrumentation within easy reach of assistant and doctor.
- Work surface slides in and out 12" and adjusts vertically. Angled footrest.
- Counter top conceals ultra-thin instrument drawer. Ample storage space is provided in cabinet base.
- Versatile assistant Aspiring contoured for ease of operation.
- Louvered space for analgesia rubber goods, Aspiring, ultra-sonic scaler and other accessories
- **Options:** Rotating base with 60° swivel radius. Amalgamator. Built-in N200C Analgesia unit. Ultra-sonic scaler. Accessory storage cabinet. Transilluminator and hydro-colloid quick disconnect.

EDITORIAL

A Dental Convention with a Difference — Opportunity or Responsibility?

Dental conventions are an integral part of the professional life of the Canadian dentist. They have been for many years now. They come and they go and, generally, they are well attended by Canadian dentists whether the meeting is held in Canada or in foreign lands.

One of the international meetings which regularly attracts large numbers of Canadian dentists and their families to other countries is the annual World Dental Congress of the Fédération Dentaire Internationale. The FDI is a world wide dental organization primarily comprising national dental association members, of which the CDA is one, and individual dentist supporting members, of whom Canadian dentists now number about 1200.

The major objective of the Fédération is to improve the dental health of the people of the world, with particular emphasis on helping those in the less privileged countries. One method by which the Fédération attempts to achieve this basic objective is to hold annual World Dental Congresses which serve as international forums for the exchange of scientific and related data. Those who can contribute to the scientific program have an obligation to do so. Those who are seeking new or different ideas (and who isn't?) have the unique opportunity to share the knowledge of lecturers from all parts of the world.

Canadian dentists who have attended previous World

Dental Congresses have enjoyed the hospitality of, and profited from, their confreres from many countries. Never, until this year, have dentists in Canada had the opportunity to return these favours.

From October 22-28, the Canadian Dental Association is sponsoring the 1977 World Dental Congress in Toronto. This is the first time Canadian dentistry and Canada have been so honoured. An extensive practical scientific program, aimed at furthering the objectives of the Fédération, has been organized featuring renowned speakers from countries around the world. A variety of social events and tours, interspersed throughout the week of the Congress, will provide the Canadian hosts with the opportunity of returning some of the hospitality they have enjoyed in other lands.

The Canadian Dental Association is most anxious that the 1977 World Dental Congress be one of the best ever and that we, the dentists of Canada, show what excellent hosts we can be. For Canadian dentists this is a "convention" with a difference.

Can you help? Yes, you can — by being there and offering a friendly hand of fellowship. This is both an opportunity and a responsibility that should not be missed!

William G. McIntosh,
Chairman,

Congress Organizing Committee

65TH ANNUAL WORLD DENTAL CONGRESS OF THE FEDERATION DENTAIRE INTERNATIONALE

Toronto, Ontario
October 22-28, 1977

Sponsored by: The Canadian Dental Association/
L'Association Dentaire Canadienne

Registration and
Hotel Reservation
Forms at the back
of this issue

the pindex[®] system

DELUXE MODEL: A UNIT FOR QUALITY, PRECISION AND VOLUME PRODUCTIVITY

Automatic air system with air foot control.

- An ECONOMICAL

- PRECISE

- DIRECT

method to fabricate dies and removable sections from master models.

a proven method used by outstanding laboratories and dentists throughout the worldwide dental community.



*Available only through your dealer
designers and manufacturers of products for finer dentistry.*



WHALEDENT International
Division of IPCO Hospital Supply Corp.

236 fifth avenue, new york, n.y., 10001

Demonstrated at all major conventions

393

Dentsply presents the Classic™ Dental Stool.



The color shown is Bittersweet, all vinyl.

It was designed to be nothing less than indispensable to your comfort and health.

And if this seems like a strong statement, please read this.

The Dentsply CLASSIC™ Stool is a whole revolution in seating comfort.

(A) Underneath the beautiful upholstery of the CLASSIC Stool are three layers of a new foam material called *Sensa™*. *Sensa* Foam was developed for NASA as cushioning for space vehicle seats.

Sensa Foam not only is pressure sensitive but also *temperature sensitive*. The heat from your body causes the material to *actually flow*—much like impression material—in conformity with your individual body contours. This relieves the pressure at the bony ischial and sacral areas and redistributes it more evenly over the entire posterior and thighs. It's like floating. And it reduces the build up of "numb" pressure points that cause you to shift while operating—and, even though subconsciously, distract you from your best work.



(B) This photograph illustrates how the *Sensa* cushion creates what we call a "natural saddle"™ seat. As the model raises up, the contour impression of his buttocks and thighs is clearly visible in the comfortably wide seat—dramatic proof that *Sensa* Foam *conforms and supports* as claimed. You get the support of a saddle seat precisely molded to your shape. And you never have to rotate the



seat to any particular position. You form a new, perfect, *natural saddle™* each time you sit down. Seconds after you leave the cushion *Sensa* Foam returns to its original state.



The Dentsply back-abdomen-arm support treats your body as lovingly as *Sensa* Foam treats your seat. The support rotates freely a full 360 degrees around the seat to provide contoured, cushioned support wherever you need it. The unique, patented parallelogram movement adjusts to every body position and gives you full support no matter how you sit or work. Vertical adjustment accommodates the extra long or extra short torso.



The body support is activated by a flush mounted finger touch control. Simply squeeze, adjust and release—it locks exactly where you want it.



Going up or down in the CLASSIC Stool is smooth,

swift and gentle. The lift control ring goes 360 degrees around the stool under the seat so that it can be reached easily with either hand and from any angle. To go up, raise your seat slightly; to go down you just sit tight. When you release the control ring you and the seat are locked at the desired height.

A low low, a high high. With adjustments the seat goes from a low low of 16½" to a high high of 25½", so it works equally well for the not so tall dentist and the very tall dentist.

Five legs instead of four. You and your assistant will appreciate the added stability and feeling of security.

New caster design. Not just one roller, but two, so the casters can turn easily without twisting for better mobility on tile or carpet.

Protective bumpers. The five legs of the CLASSIC Stool have bumpers to protect you and your office furniture.



The CLASSIC Stool is available in the ten fabric/vinyl color combinations of the Dentsply CLASSIC® Chair and in ten popular U.S. Royal Naugahyde® colors. All upholstery materials are flame resistant.

Spend just twenty minutes with the CLASSIC Dental Stool. Your dealer has it now.

DENTSPLY Equipment

Dentsply International, York, PA 17405

VIEWPOINT

In the June, 1977, issue of the Journal, we published an Editorial by Dr. A. Ruprecht of the University of Saskatchewan and Dr. J. A. Reid of the University of Western Ontario entitled "Radiographs and Third-Party Carriers". The following two "Viewpoints" represent alternate opinions on the subject of the June Editorial.

At the onset, we agree that: (a) although dentists are not legally required to deal with third-party carriers, most do so because of the desire to help their patients receive due compensation for the services rendered; (b) we understand the desire of the third-party carriers to ensure payment was for necessary treatment and that the treatment was rendered; (c) the third-party carrier does not have a legal right nor the professional responsibility to dictate mode of treatment, material used or types of records kept; (d) the dentist has the right to know who receives any submitted claim (although we have been told by third-party carriers, it is none of our business to know who their dental consultant is or the fact that they have no dental consultant in Quebec); (e) any question on the part of the carrier should be referred to one of the dental profession's mediations committees; (f) the third-party carrier does not have the right to review treatment with respect to need or quality; and (g) the insurer does not have the right to compel the submission of any private records.

Nevertheless, the Quebec Dental Surgeons Association policy with regard to the submission of X-rays is contrary to your view that a reasonable request should be adhered to if in the judgement of the dentist the situation warrants such.

The policy established by the QDSA with reference to radiographs and third-party carriers is as follows:

A) When pre-treatment X-rays are requested by a third-party carrier, members of the QDSA should only submit a signed radiological report, at the appropriate fee.

If this is not acceptable to the third-party carrier, they must utilize one of two alternatives, that is:

- a) to send their dental consultant in pre-treatment situations to examine the pre-treatment radiographs providing the consultant meets the guidelines for dental consultant activity as stipulated in our Manual, or
- b) to utilize the Mediations Committee of the QDSA, as long as the process of mediations does not impinge upon the jurisdiction of the Order of Dentists of Quebec.

B) When a Prepayment Plan requests submission of pre-treatment records once treatment has begun, or pre-, in-, or post-treatment records (radiographs, study models, etc.) during treatment or as part of a claim for treatment rendered

or after said claim has been submitted, these records should be submitted only to the QDSA Mediations Committee, or in response to a legal requirement, and not to a prepaid dental plan or its dentist consultant.

This policy was established by the QDSA as the only manner in which to preserve the integrity of the patient-dentist relationship due to the fine line which exists between the determination of liability and peer review.

The dentist co-operates by supplying a Standard Dental Treatment Plan Form and a Standard Dental Claim Form to third-party carriers and would as well adhere to any other of the policies established with regard to third-party carriers.

The third-party carrier, therefore, gets a signed document from the dentist, which by said signature is a legal document attesting to the services to be performed or to the services that have been rendered.

This principle, of course, also applies to a signed radiological report. However, if this does not suffice for the carrier there is always the process of mediations by the Mediations Committee of the QDSA, and our licensing body, the Order of Dentists of Quebec, if the process of mediations goes beyond that fine line between the determination of liability and peer review.

By a united front in this regard, we will maintain the integrity of the patient-dentist relationship and avoid the unacceptable situation which exists in the United States with regard to third-party coverage.

*Clyde Covit, DDS
Chairman, Insurance Committee,
Association des chirurgiens dentistes
du Québec*

Originally, third-party dentistry presented Canadian Dentistry with two choices:

1. Underwrite a dental insurance plan at the Canadian Dental Association level for the whole of Canada, with each province serving as a branch member;
2. Co-operate with the private insurers and utilize their marketing expertise and financial resources to provide this service to all the people of Canada. The various provincial dental bodies, in concert with the CDA, could serve in an advisory capacity to the insurance industry in order to provide dental coverage which would be fair to patient, dentist and insurer. Policy should be determined at the CDA level in order to provide uniformity for all plans, particularly those written for employee groups, all across the country.

Canadian Dentistry, with rare exceptions, chose the second option — to co-operate with the insurance industry. To operate dental insurance plans successfully for the benefit of

Continued on page 401

DISPERSALLOY*

Dispersed Phase Alloy

10 YEAR CLINICAL HISTORY

*You say you
want clinical
evidence!*

†8 out of 10 doctors surveyed chose physical properties proven by long term clinical evidence as the most important criterion for selecting an amalgam for use in their practices.

397

DISPER

THE ONLY AMALGAM THAT CAN SHOW CLINICAL EVIDENCE LIKE THIS...



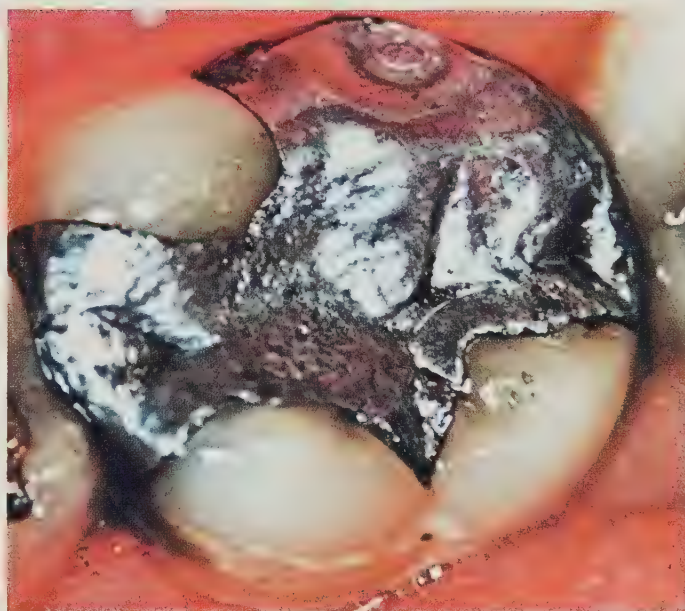
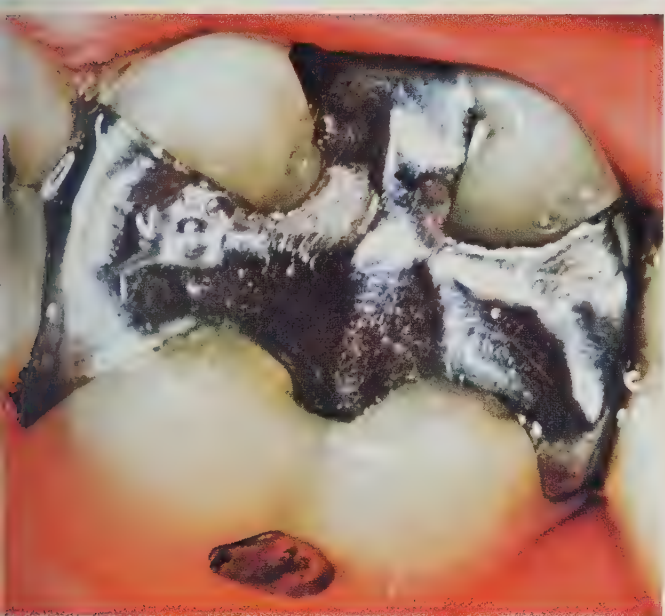
References: (Available on request from the authors).

1. Sarkar, N. K. and Greener, E. H.: Detection and Estimation of the γ_2 Phase in Dispersalloy by Electrochemical Techniques. J. Dent. Res. 51:1675, Nov.-Dec., 1972. 2. Wilsdorf, H. G. F. and Young, F. A., Jr.: Study of The Strength Relationship Between Dental Amalgam and Ag_3Sm . IADR 43rd General Meeting Program and Abstracts of Papers, Abstract 101, pg. 62, 1965. 3. Young, F. A., Jr. and Wilsdorf, H. G.: The Mechanical Properties of The Tin-Mercury Phase in Dental Amalgam, IADR 44th General Meeting Program and Abstracts of Papers, Abstract 278, pg. 108, 1966. 4. Binon, P., Phillips, R. W., Swartz, M., Norman, R. D. and Mehra, R.: The Clinical Behavior of Amalgam as Related to Certain Mechanical Properties. J. Dent. Res. Program and Abstracts of Papers, Vol. 52, Abstract 509, Feb., 1973. 5. Mahler, D. and Van Eysden, J.: Dynamic Creep of Dental Amalgam. J. Dent. Res. 48:501, 1969. 6. Mahler, D. B., Terkla, L. G. and Van Eysden, J.: Marginal Fracture of Amalgam Restorations. J. Dent. Res. 52: 823, 1973. 7. Gal, J., Phillips, R. W. and Swartz, M. L.: Plastic Deformation of the Amalgam Restoration as Related to Cast Design and Alloy System. J.A.D.A. 87: 1395, 1973. 8. Mahler, D. B., Terkla, L. G., Van Eysden, J. and Reisbick, M. H.: Marginal Fracture vs. Mechanical Properties of Amalgam. J. Dent. Res. 49:1452-1457, Nov.-Dec., 1970. 9. Innes, D. B. K. and Youdelis, W. Z. Department of Mining and Metallurgy, U. of Alberta, Edmonton, Alberta, Canada. Dispersion Strengthened Amalgams, J. Canad. D. A. 29:587-593, Sept., 1971. 10. Jorgensen, K. D. and Saito, T.: Tandlaegebladet 73:557, 1969. 11. Phillips, R. W.: The Science of Dental Materials, Seventh Edition, pg. 330. 12. Barber, T. and Reisbick, M. H.: Amalgam: Past, Present, Future. J.A.D.A. 82: 866-7, April, 1973.

DISPERSALLOY

BRAND

Dispersed Phase Alloy



10 YEAR DISPERSALLOY*

Shiny, Corrosion-Free

... at the most, 0.3% corrosion-prone Gamma II¹.

Minimal Ditching

DISPERSALLOY* has dramatically low creep^{4, 5, 6, 7}, the single proven physical property which appears most predictive of marginal fracture^{4, 8}.

Dispersion-Strengthened

Silver/Copper eutectic particles in DISPERSALLOY* form a bond to the matrix stronger than the matrix itself⁹.

High Early Strength

The 1-hour compressive strength of DISPERSALLOY* approaches maximum masticatory pressures¹¹. Most restorations which eventually fracture probably form the initial fissure during the first few hours¹⁰.

10 YEAR CONVENTIONAL AMALGAM

Dull, Discolored

... may have as high as 10% corrosion-prone Gamma II^{2, 3}.

Greater Marginal Breakdown

A conventional amalgam tested had over 8 times higher creep (plastic deformation under loading) than DISPERSALLOY*⁷.

No Dispersed Phase

Conventional amalgams contain no dispersed phase particles. Particle *shape* ... spherical or otherwise ... makes little difference to the final strength of any amalgam after setting.

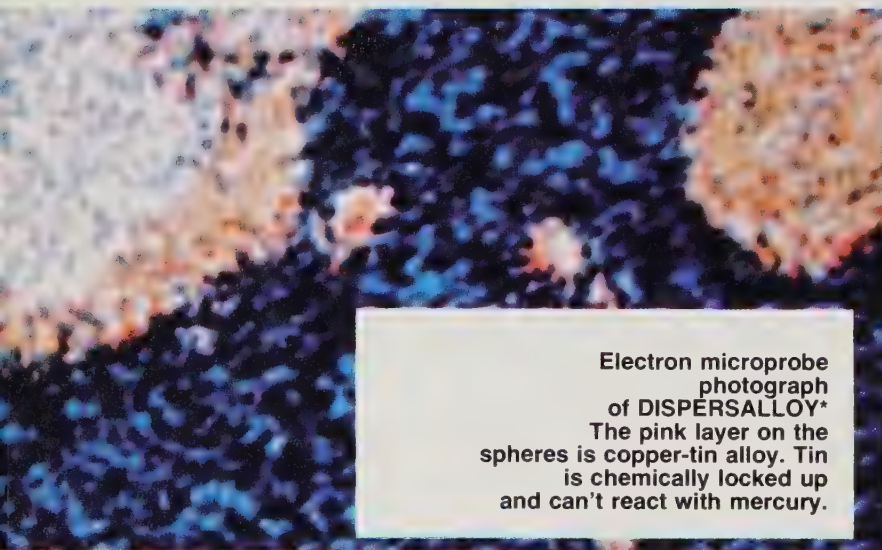
Varied Early Strength

Some of those conventional amalgams which do have high early strength also contain high corrosion-prone Gamma II, and may exhibit high creep.

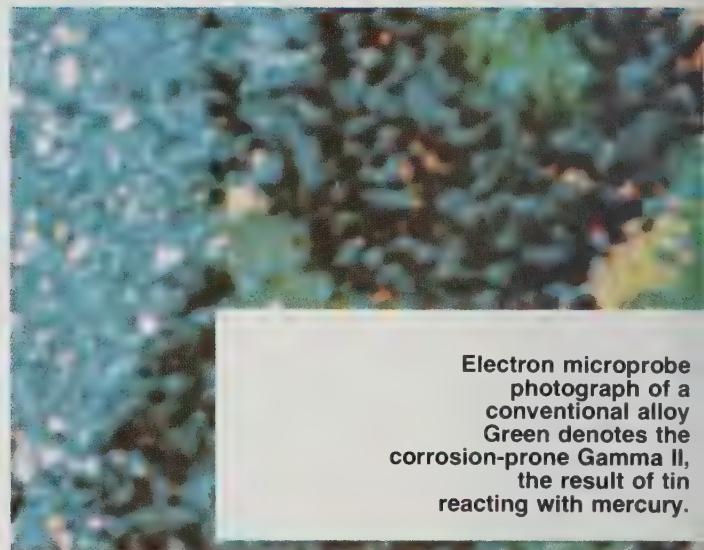
DISPERSALLOY[®]

Dispersed Phase Alloy

IS DIFFERENT THAN CONVENTIONAL ALLOYS



Electron microprobe photograph of DISPERSALLOY*
The pink layer on the spheres is copper-tin alloy. Tin is chemically locked up and can't react with mercury.



Electron microprobe photograph of a conventional alloy
Green denotes the corrosion-prone Gamma II, the result of tin reacting with mercury.

DISPERSALLOY*: WITH **CORROSION-RESISTANCE**

SILVER/COPPER/TIN

During trituration tin is attracted and "locked in" by the silver/copper eutectic spheres (light orange area of electron probe microphoto). Virtually no tin is left to react with mercury and form corrosion-prone Gamma II.

Silver/Copper eutectic particles reinforce DISPERSALLOY* by forming an intermetallic bond with matrix. This bond is stronger than the matrix itself⁹.

Corrosion-resistant matrix: DISPERSALLOY* is essentially free of corrosion-prone Gamma II component found in conventional amalgams. (Light blue: Silver/Mercury; Dark blue: Silver/Tin.)

Amalgams vary in the shape and size of their particles. But . . . until DISPERSALLOY* . . . the alloy composition of most amalgam alloys followed the chemistry of G. V. Black's formula, introduced about 1900¹². "Spherical" alloys are conventional alloys with round particles.

DISPERSALLOY* introduces a fundamental change. It virtually eliminates the weak phase in conventional amalgams: the corrosion-prone Gamma II (tin-mer-

A CONVENTIONAL ALLOY: WITH **CORROSION-PRONE**

MERCURY/TIN (Gamma II)

Gamma II, the weak phase in conventional amalgams, is revealed by green area in electron probe microphoto. It may be as much as 10% in some conventional amalgams^{2, 3}.

cury) phase. It's done by removing a large percentage of the tin from conventional amalgam formulations, and substituting with silver/copper eutectic particles. During trituration, the copper attracts and chemically "locks in" the remaining tin. Virtually none is left free to react with mercury. Gamma II is essentially eliminated. The result: the first virtually corrosion-free amalgam proved superior in clinical performance.

Johnson & Johnson

DENTAL DIVISION DENTAIRE

MONTREAL, TORONTO, VANCOUVER
CANADA

all concerned, the insurance industry had to have the full co-operation of the dental profession all the way down the line. Insurers have sought, and received, advice in the structuring of dental plans, in the formulation of claims forms, in the exclusions of the policies, in the format for treatment authorization, etc. The dental profession has, for the most part, co-operated handsomely and has benefitted from doing so.

Naturally, there have been areas of disagreement, most of them minor and some as yet unresolved. However, on the whole, third-party dentistry has evolved smoothly and will continue to do so as long as the profession recognizes the issues involved. Third party dentistry is here to stay as long as the provincial governments do not institute denticare plans. This is Canadian Dentistry's best alternative to socialized dentistry. Since we have abdicated the responsibility of running the show ourselves, our only alternative is to work in co-operation with the insurers to encourage them to operate the plans as we would wish to operate them ourselves.

Submission of x-rays for pre-determination of treatment plans is not a terrible catastrophic demand made upon the individual dentist. Ethically and legally (contrary to the opinion expressed in the editorial by Drs. Ruprecht and Reid) as long as the x-rays have been paid for — and this would certainly be guaranteed by the insurer — they may be sent to another dentist. If this dentist is acting in the capacity of advisor or consultant for an insurer, and the insurer merely acts as an agent for collecting these x-rays for its consultant, there is no ethical or legal ground on which a dentist could, or should, refuse to submit x-rays along with a predetermination form.

I have always considered the safeguard of predetermination by an insurer the equivalent of submitting an estimate of cost of treatment to the patient. In the instances of third-party dentistry the predetermination, or estimate, is being submitted to that office which will be paying the bill. I have no qualms about patient/dentist responsibility in this instance, just as I have none when I submit an estimate to a parent for dental treatment to be rendered to his child. Policy statements of the CDA have, for years now, advocated estimating in advance of performing treatment.

I could go on at great length presenting numerous legal and ethical arguments for working with third-party insurers. However, the most important point to be made is that third-party dentistry will work only if the dental profession runs the plans itself, or, if it chooses not to do so, co-operates fully with the insurers who, for the most part, are doing an excellent job. So let's not listen to the detractors, to those who seize upon every little point of controversy, but instead look upon third-party dentistry in its entirety and work toward its continual improvement for the mutual benefit of all concerned — the patient, the dentist and the insurer.

*Harry Tregobov, DDS
566 Osborne Street,
Winnipeg, Manitoba*

AMOSAN OXYGEN POWER PACK.

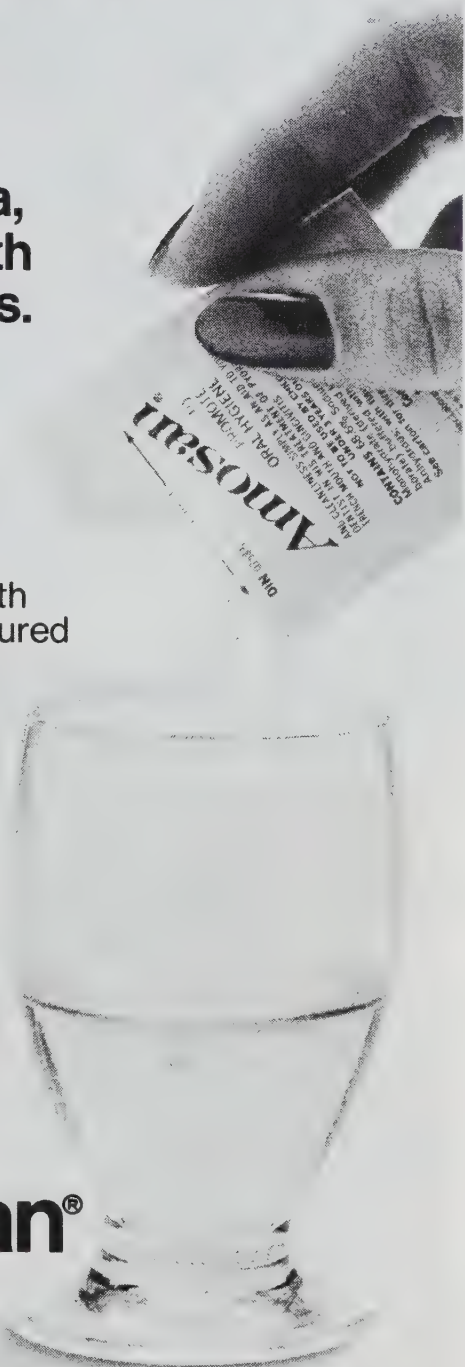
**For pyorrhea,
trench mouth
and gingivitis.**

Amosan® delivers more oxygen to the gums, a minimum 162mg per packet. A vigorous rinse with a single premeasured packet of Amosan in just 1 oz. of water exposes all interproximal areas and gingival margins to this effective adjunctive treatment. Send for your free dentist's samples of Amosan, the whole-mouth treatment.

Amosan®

Cooper

Cooper Laboratories Limited
Boisbriand, Quebec.



Dentistry in the news

CDA EXECUTIVE COUNCIL APPOINTS DIRECTOR OF STUDENT AFFAIRS

The Executive Council of the Canadian Dental Association is pleased to announce the appointment of Linda D. Teteruck as Director of Student Affairs, effective June 1, 1977. Ms. Teteruck, who joined the CDA staff in January, 1975, was previously Secretary, Office of Student Affairs, and Administrator, Dental Aptitude Test Program.

In her new capacity, Ms. Teteruck will be responsible for all areas within the CDA Department of Student Affairs. This includes responsibility for: the administration of the Dental Apti-

tude Test Program for prospective dental students; the CDA Student Table Clinic Program; the annual Canadian Dental Students' Conference; the annual CDA Student Membership Campaign and "Welcome to the Profession" receptions at each of Canada's 10 dental faculties; and, communication and liaison between Canadian dental students and the Canadian Dental Association.

Ms. Teteruck received her Master of Arts degree in history from the University of Western Ontario in 1974. Prior to joining CDA, she was a departmen-



Linda Teteruck

tal teaching assistant in the University of Western Ontario's Department of History.

The new Director of Student Affairs is located in the CDA Headquarters offices at 1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6.

CDA STUDENT MEMBERSHIP CAMPAIGN '77

During the month of September, the Canadian Dental Association will launch its student membership campaign '77 in dental schools from coast to coast. The number of dental students joining the CDA has increased steadily in recent years, with 1976 membership figures hitting record levels. 1977 is also expected to be a record year as more and more dental students recognize the fact that membership in their national association is now, more than ever, a sound investment in the future of their careers.

As part of the campaign the CDA Department of Student Affairs will hold a "Welcome to the Profession" reception at each Faculty of Dentistry across the country in late September or early October. The receptions in Ontario will be co-hosted by the CDA, the Ontario Dental Association and the Royal College of Dental Surgeons. At each reception the Director of Student Affairs, Linda Teteruck, will be joined by one of the CDA Governors and a

member of the provincial dental association who will outline the wide range of activities of the CDA and how these relate to the needs of dental students. Discussions will also focus on the benefits of CDA student membership.

A highlight of each reception will be the gift presentation to the 1976-77 student representative of the Faculty in recognition of his or her service to the CDA during the past year.

Eligibility requirements for CDA student membership are very straightforward: for a single annual fee of \$5.00 any student enrolled in a Canadian Faculty of Dentistry, or any graduate dentist who has proceeded directly from an undergraduate program to a full academic year of advanced study in an accredited school or hospital program, is eligible for CDA membership and its accompanying benefits. In Ontario, the situation differs in that conjoint CDA/ODA membership is being offered to students at an annual fee of \$10.00. This

entitles any undergraduate student in an Ontario Faculty of Dentistry to the membership benefits of both the CDA and the ODA.

Student input in the Canadian Dental Association has been broadened and strengthened through the newly formed Council on Student Affairs which reports directly to the CDA Executive Council and Board of Governors, as do all other full Councils of the Association.

The advantages of student membership in the CDA are many and varied. The \$5.00 annual fee entitles the student to:

- a yearly subscription to the Journal of the Canadian Dental Association
- attendance at and participation in the annual CDA National Convention
- an opportunity to participate in the CDA Student Table Clinic Program
- automatic membership in the International Association of Dental Students with its student exchange pro-

Continued on page 404



Tools of the Trade

Colgate's Special MFP Fluoride provides continuing protection against cavities between check-ups.

the fluoride treatment you give gets patients off to a good start. But important that they brush with an effective fluoride toothpaste, like Colgate,* you're fighting cavities between check-ups too. Our clinical tests show that the use of Colgate with MFP fluoride significantly reduces the number of cavities. Used in conjunction with your topical fluoride application,

it follows that there should be an even greater reduction of cavities.

How does Colgate's special fluoride MFP fight decay? We believe that MFP* (sodium monofluorophosphate) is effective in converting the surface layer of apatite (calcium hydroxyphosphate) into fluorapatite (a calcium fluorophosphate) thus making the tooth more resistant to decay.

Colgate's MFP is stable. Even after

three years the sodium monofluorophosphate is still present and able to react with tooth enamel.

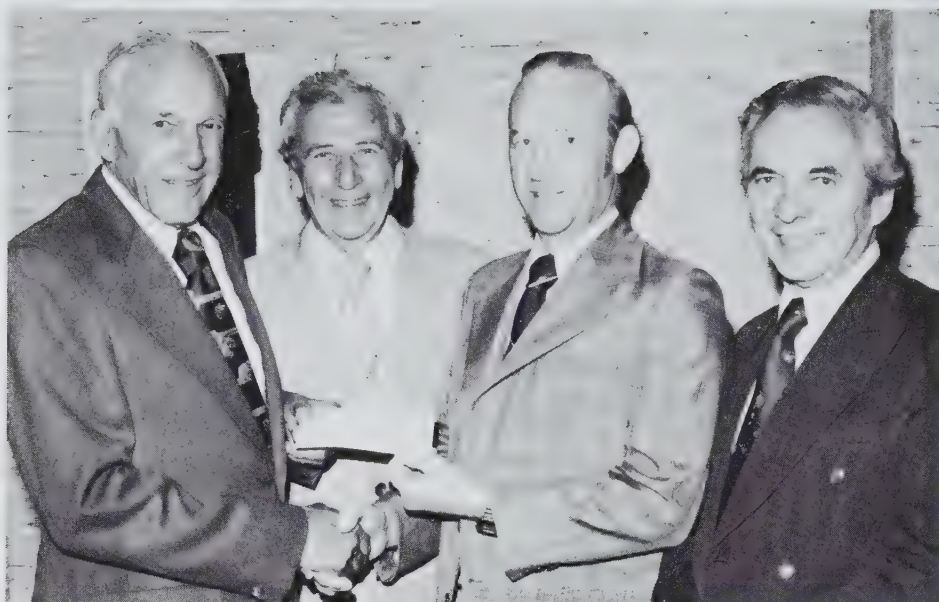
And it's reassuring to know that staining of teeth, a problem associated with some dentifrices is not a problem with Colgate's MFP.

You might remind your patients how important it is to back-up your fluoride protection...with the kind that Colgate's special MFP fluoride provides.

"Colgate has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied programme of oral hygiene and regular professional care."

*TM

Canadian Dental Association.



Dr. Ronald Martin (second from right) presents \$3,000 cheque to M.E. Bower while Dr. Murray Buchman (far right) and Murray MacDonald register their approval

STUDY CLUB ADDS \$3,000 TO ITS CFDE TRUST FUND

In March 1976 Dr. Arthur Breglia and Dr. Noble Hori presented a \$5,000 cheque to the Canadian Fund for Dental Education on behalf of the Crown and Bridge Study Club of the Toronto Academy of Dentistry.

Purpose of this generous gift was to establish a Trust Fund with the annual income therefrom helping to finance CFDE's programs to advance dental education and research.

At the time the Study Club indicated that it hoped to add to the Trust Fund as money became available.

The Study Club obviously meant what it said as evidenced by the \$3,000

cheque recently presented by Dr. Ronald Martin, Past President, and Dr. Murray Buchman, President, to Mr. Bud Bower, a founding Trustee and former Chairman of CFDE, and Mr. Murray McDonald, Executive Director of the Fund.

In accepting this latest gift Mr. Bower said: "The annual income from this Trust Fund is of significant help in achieving our objectives and is most encouraging to all of us connected with CFDE. We are most appreciative of the Crown and Bridge Study Club's continuing generous help and hope it will prompt other similar organizations to follow its fine example."

MEDICAL RESEARCH COUNCIL DENTAL TRAINING GRANT

Under the terms of a Medical Research Council Grant a dental training program has been established at the Faculty of Dentistry of the University of Toronto which provides two openings each year for Canadian graduate dentists interested in research in the clinical dental sciences and is designed to provide research trained clinical teachers for Canada. Curriculum covers a minimum of four years including at least three years devoted to training

in research leading to a Ph.D. degree. Funded by the Medical Research Council the program provides successful applicants with awards equal to those of MRC Fellows.

Applications and further information can be obtained from: Dr. G. S. Beagrie, Dental Training Grant Programme Director, Faculty of Dentistry, University of Toronto, 124 Edward Street, Toronto, Ontario, Canada M5G 1G6.

DEATHS

Armstrong, Willard Ferrier, 76. Espanola, Ontario. University of Toronto, 1925. 11-7-77.

Dawson, Delmar Goodwin, 53. Neepawa, Manitoba. University of Toronto, 1953. 7-77.

Ingimundson, August B., 69. Gimli, Manitoba. University of Toronto, 1935. 24-6-77. Survived by Mickey (wife) and Ross (son).

Rice, Robert, N.D., 57. Petitcodiac, New Brunswick. Dalhousie University, 1944. 10-7-77. Survived by Winona (wife) and Richard and Patrick (sons).

Thurston, Gordon Bertram, 79. Edmonton, Alberta. University of Toronto 1926. 6-77. Survived by Ruth (wife) and James and Donald (sons).

Turack, Edward John, 59. Toronto, Ontario. University of Toronto, 1943. 13-7-77. Survived by Merle (wife) and Stephen and Fred (sons).

White, Cecile Charles, 74. Windsor, Ontario. University of Toronto, 1927. 22-7-77.

CDA Student Membership Campaign

Continued from page 402

- gram and annual International Congress
- access to all CDA publications and the Association's extensive dental library
- direct student representation in the CDA through the selection of your CDA Student Representative
- direct input into all areas of CDA student activity through the CDA Council on Student Affairs and your Student Representative's attendance at the annual Canadian Dental Students' Conference
- information regarding the provincial and national bodies of the dental profession
- information and benefits from the national and provincial dental insurance and investment plans.

Bristle up your patient's plaque attack

introducing **Py-co-pay[®]** **Softex 4[®]**

When a 4-row brush is
preferred for plaque control,
recommend the only 4-row
that can make these claims.

Over 3,200 bristles in
Softex 4 work to ensure extra
cleaning power, especially in the
plaque-prone sulcular region

0.07" diameter nylon
bristles offer safer, more
penetrating cleansing of
supragingival and subgingival
plaque from sulci, occlusal
fits, fissures and
interproximal surfaces

Double-rounded,
and-polished bristle tips
help protect tissues from
possible abrasion

- **compact brush head**
slimmer and more manoeuvrable
— makes it easier to clean
hard-to-reach areas of the
teeth and gingival sulci
- **smooth, rounded head
contours** not sharp or
angular — helps diminish the
danger of trauma to sensitive
tissues, especially those
opposite the buccal of the molars
- **tapered head design**
less plastic bulk — provides
immediate contact of the bristles
with teeth and gingivae

Choose the Softex that fits your patient's needs

SOFTEX JUNIOR	SOFTEX 3	SOFTEX 4
3 staggered rows 1200 bristles	3 staggered rows 2400 bristles	4 rows 3200 bristles



Professional Relations Division
Block Drug Company (Canada) Ltd.
36 Northline Rd., Toronto, Ontario M4B 3E3
"Quality Products for Dental Health"



Colonel J. M. Donely



Lieutenant Colonel J. V. Lanctis

CANADIAN FORCES DENTAL SERVICES

Colonel J. M. Donely was promoted to that rank in July, 1977, and appointed Director of Dental Treatment Services. A 1950 graduate of the University of Toronto, Col Donely's more recent appointments include Commanding Officer of 35 Field Dental Unit in Lahr, Germany, Commanding Officer of 1 Dental Unit in Ottawa, and Director of Dental Plans and Requirements at NDHQ.

Lieutenant-Colonel V. J. Lanctis as-

sumed the function of Director of Dental Plans and Requirements in July, 1977. LCol Lanctis obtained his BA and DDS degrees from the University of Montreal in 1962 and 1966 and completed the Canadian Forces Staff College course in 1973. He served a two-year term in Postings and Careers before moving to the Division where, among many other duties, he was responsible for DOTP recruiting and the publication of the CFDS Quarterly.

BREAKFAST CEREAL LABELS MUST DECLARE SUGAR CONTENT

National Health and Welfare Minister Marc Lalonde and Consumer and Corporate Affairs Minister Tony Abbott recently made public a proposal that the labels on breakfast cereals declare the total amount of sugar and other sweeteners, as a percentage of the total weight of each cereal. The proposal is contained in a letter sent to all manufacturers of breakfast cereals by the Health Protection Branch (HPB), Department of National Health and Welfare. The letter also includes proposals for mandatory minimum content of vitamins and minerals that would be required in cereal products.

A survey of the sugar content of Canadian breakfast cereals was re-

cently completed by HPB. Seventy-four cereals were analyzed and the results indicated that sugar represented up to approximately 56 per cent of the weight of some cereals. Certain foods which are mostly sugar, such as candies and soft drinks, are easily recognized but Canadians may not be aware of the large amount of sugar in some manufactured foods, such as certain breakfast cereals.

Mr. Lalonde noted that unwise use of sugar is linked to dental caries, a widespread health problem in Canada.

The recently released Nutrition Canada Dental Report has drawn attention to the extent to which caries has affected the dental health of Canadians.

Mount Royal Dental Society

Dr. Ezra Kleinman has been elected president of the Mount Royal Dental Society and the Montreal Alumni Chapter of the Alpha Omega Fraternity. He succeeds Dr. Mel Hershenfield.

The Mount Royal Dental Society has a membership of 350 Montreal area dentists and this year celebrated the 56th anniversary of its foundation.

Other members elected to office were: Dr. William Klein, vice-president; Dr. Stephen Miller, corresponding secretary; Dr. Richard Topolski, recording secretary; and Dr. Peter Safran, treasurer.

Saskatchewan appointment

Dr. Axel Ruprecht has been appointed head of the Department of Oral Diagnosis and Radiology in the College of Dentistry, University of Saskatchewan. Dr. Ruprecht has been acting head of the Department for the last year and one-half.

Before joining the University of Saskatchewan in 1975, he was an assistant professor in the Department of Oral Medicine, Division of Oral Radiology, University of Western Ontario.

He received his dental education and did postgraduate work at the University of Toronto.

Orthodontics course

The Faculty of Dentistry, University of Manitoba, has announced a change in the commencement date of its graduate course in orthodontics. Beginning January 3, 1978, the course leading to the MSc in orthodontics will commence in January rather than September. The deadline for receiving applications will be October 31 of each year. Requests for further information and application forms should be made to the Director of the Program: Dr. Arthur T. Storey, Professor and Head, Department of Preventive Dental Science, Faculty of Dentistry, University of Manitoba, Winnipeg, Manitoba R3E 0W3.

new **Aim**® toothpaste

The fluoride toothpaste with the taste children prefer



Child-tested and proven for its superior taste

1300 children tested the taste of new Aim Toothpaste against the taste of the two leading fluoride brands. Result: Children preferred Aim 2 to 1 over those brands. They find its minty flavour truly delicious and they love its clear blue-green color and smooth texture.

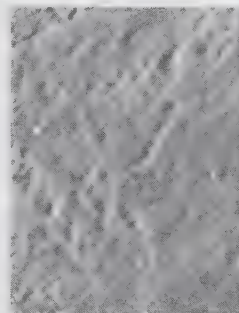
Significance: With taste so superior, your young patients will hardly need coaxing about brushing. And by brushing regularly, they'll get the anti-cavity ingredient they need — regularly.

Proven for its fluoride ion availability

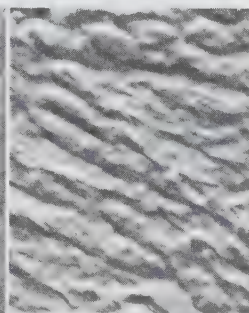
New Aim contains the established concentration of 0.4% annous fluoride — an anti-cavity ingredient time-proven for its effectiveness as an aid in reducing the incidence of cavities. Aim also has a silica gel base, assuring that the fluoride ion availability is maintained during normal shelf life. In fact, laboratory tests show that the fluoride concentration in Aim is readily available for incorporation into tooth structure.

Proven for its gentleness to dentin and enamel

Aim's silica aerogel/xerogel abrasive system* aids in the removal of plaque, pellicle, food particles and stains — with notable gentleness to enamel and dentin. Significance: Aim means patients' teeth safely — the way you want them to be.



Surface of normal tooth enamel (2000×) — treated with Aim (exposed section of polished enamel surface, immersed for 15 minutes in a 25% aqueous slurry of Aim followed by a thorough rinsing) — then etched with 0.1N lactic acid, pH 4.5 for 10 minutes. Enamel surface shows minimal etching.



Surface of normal tooth enamel (2000×) — sectioned and polished but left untreated — etched with 0.1N lactic acid, pH 4.5 for 10 minutes. Enamel surface shows extensive etching.

RECOMMEND AIM WITH CONFIDENCE...



a product of:
LEVER DETERGENTS LIMITED
Toronto, Ontario M4M 1B6

*Canadian Patents #835353; #914069

NUTRITION CANADA DENTAL REPORT

Emphasis in dental care needs to be placed on fluoridation of water supplies and on nutrition and public education programs, according to the Nutrition Canada Dental Report recently made public by Health and Welfare Minister Marc Lalonde.

The major findings of the survey are:

1. Dental caries is the leading cause of tooth loss in persons under 35 years of age. Ninety-six per cent of adults over 19 years of age had dental caries.
2. The percentage of children aged 12-14 years with good teeth (i.e. zero

decayed, missing and filled permanent teeth) appeared to be unrelated to income.

3. Periodontal disease is the main cause of tooth loss in persons over 30 years of age. About 15 per cent of the adult population had obvious "pockets" of periodontal disease, a condition which was generally worse in men than women.

4. Approximately 40 per cent of adults aged 19 years and over had no teeth in one or both dental arches.

5. A consistent beneficial effect of fluoridation in reducing the prevalence of dental caries was observed in children under 11 years of age.

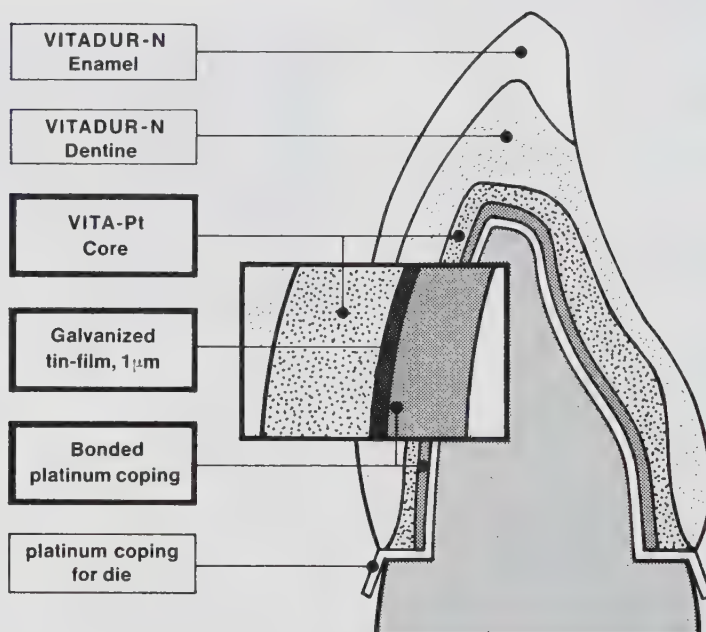
6. Thirty-nine per cent of children aged 12-14 were observed to have a malocclusion. Thirteen per cent showed a serious need for treatment and one per cent an urgent need.

The report concludes that future dental requirements as well as the tremendous backlog of problems can only be met successfully by a combination of sustained prevention and treatment.

A new advance in the construction of individual ceramic restoration

VITA-Pt. Platinum reinforced Jacket Crowns are a new concept in bonding platinum VITA aluminous porcelain using a thin oxide coating.

Research has proven **VITA Pt. P.J.C.** to give added bonded strength and esthetics, over other restorations.



 **RO TSAERT** Dental Laboratory Limited
71 Emerald St. S., Hamilton, Ont. L8N 2V4
Telephone (416) 527-1422

Please send me detailed information

- ☐ V.M.K. bridge work
- ☐ Functional generated path
- ☐ Precision attachments
- ☐ Cast Partial

DENTAL LIBRARY
Dr. _____
St. _____
City 124 EDWARD ST., Prov. _____
Code TORONTO 2

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association Retirement Savings Plan stood as follows on July 31, 1977:

<i>Common Stock Fund</i>	\$28.772
<i>Fixed Income Fund</i>	\$19.805
<i>Guaranteed Fund</i>	\$13.837

Total assets (market value) of the plan were \$26,214,905.57.

For further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ontario M5R 2P2.

BREAKTHROUGH

by
Vita Zahnfabrik

**A new way to get bond strength
in crowns, especially centrals,
without using gold.**

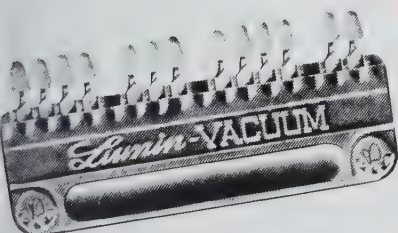
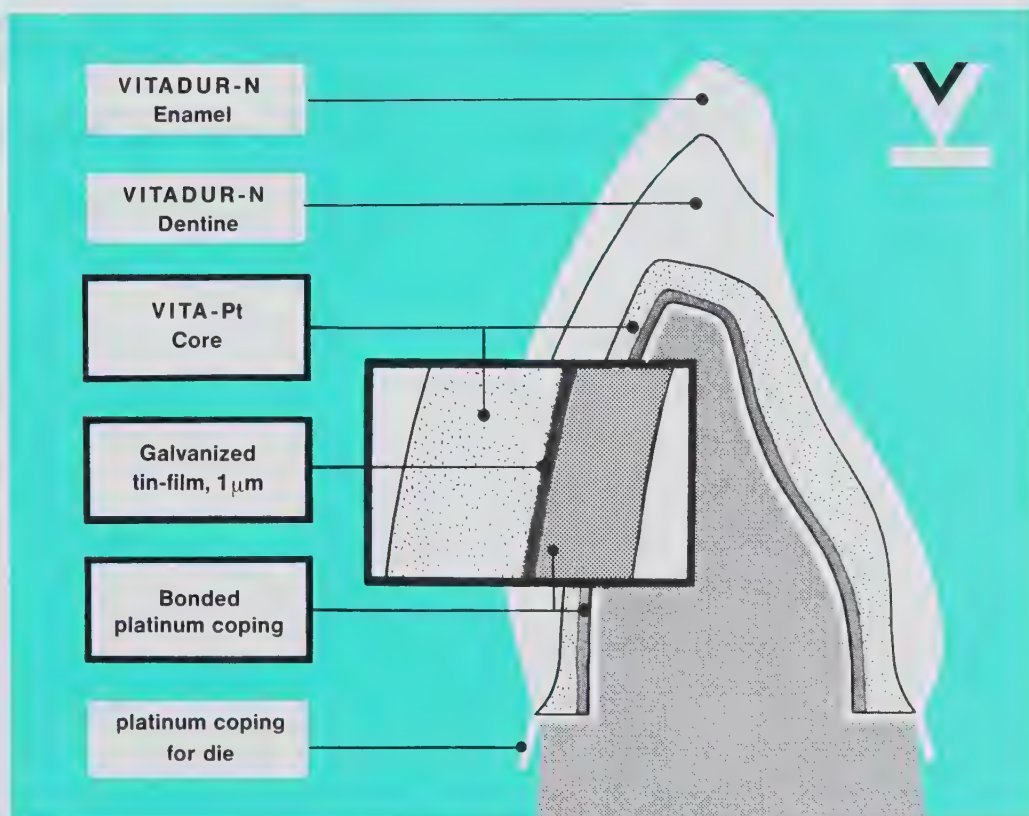
the **VITA-Pt*** technique means

more room – wider application better aesthetics

There are two platinum foil copings, one for space and one for bonding.

Although one platinum coping stays in the restoration, it's the fine tin coating that fuses with Vita Pt opaque. Gives high porcelain bond strength only possible before with compatible alloys.

The body shades are aluminous: A new, improved Vitadur N porcelain with even better Lumin Shades.



One simple system of
"original" Lumin shades.
Order your shade guide today.

VITA-Pt

A new advance for dentistry, will be demonstrated in Toronto, October 22 to 28th, at the WORLD DENTAL CONGRESS (automotive building) Canadian National Exhibition.

Look for the Vita display
at stands 244, 246, 248.



VITA ZAHNFABRIK
SÄCKINGEN WEST GERMANY

*See report by Dr. John McLean M.D.S., "The platinum bonded crown"
Australian dental journal, April 1976

The CLASSIC[®] Chair brings the relaxed rapport of the consultation room into the operatory.

Tense patients make tense appointments and tired dentists.

Many dentists are finding that the CLASSIC Chair helps relieve this problem by getting every appointment off to a good start. It may well work for you . . .

The CLASSIC Chair lets your patient sit, talk and feel natural during pre-treatment. There is no awkwardness or loss of dignity as one is seated . . . no feeling of climbing onto an operating table.

From this relaxed beginning you can proceed to a discussion of the treatment. You create understanding. You diminish anxiety; you promote calm and confidence. And so the entire appointment is likely to be easier and more pleasant.

And like many dentists, you may choose to conduct all case presentations right at the chair, eliminating the need for a separate and costly consultation room.

Are we overstating the importance of the CLASSIC Chair's unique swivel feature? We don't think so.

Increasingly, research shows how psychological factors affect personal health, comfort and responsiveness to professional

treatment. Simple in concept but revolutionary in its implications, the CLASSIC Chair provides a medium to help you create the desired psychological environment in your everyday practice.

The CLASSIC Chair is at your Dentsply Dealer's now.



The CLASSIC Chair is a superb *operating chair* designed for efficient, comfortable dentistry with whatever instrument delivery system you prefer.

DENTSPLY[™]
Equipment

D[™] Dentsply International, York, PA 17405

© 1977 Dentsply International, Inc.
All rights reserved.





65TH ANNUAL WORLD DENTAL CONGRESS TORONTO, OCTOBER 22-28, 1977

Next month the City of Toronto will roll out the red carpet to welcome the thousands of delegates gathered to attend the 65th Annual World Dental Congress of The Fédération Dentaire Internationale. This is a first for Canada. Never before has a world dental congress been held in this country and the Canadian Dental Association is proud to sponsor this unique international event.

Planning for the outstanding scientific and social program is now complete and registrations are pouring in from countries around the world. The international flavor of this Congress is most readily identifiable in the scientific program's lineup of world renowned lecturers and clinicians representing the entire spectrum of specialty areas in the field of dentistry. Speakers from North and South America, Europe, Asia, Australia and Africa will participate in the broad range of lectures, symposia, discussions, free communications and satellite clinics scheduled during the week of the Congress.

The opening ceremonies officially launching the Congress will be held at 7:00 p.m., Sunday, October 23 at the impressive Harbour Castle Convention Centre. National and international dignitaries will be in attendance to greet delegates and Canada's own 48th Highlanders will be on hand to accent the pageantry of this occasion with the stirring sounds of the pipes and drums. The official ceremonies will be followed by a delightfully informal wine and cheese party.

The highlight of the social program, the Congress Dinner and Ball, will be held Tuesday evening, October 25, at the Royal York Hotel. This formal event will include a gourmet dinner, dancing and entertainment reminiscent of the "fabulous 30's", providing a fast-paced, witty and satirical look at the era of satin, top hats and Busby Berkeley chorus lines. Three of

Canada's top principal performers will be featured, along with a chorus line of lovely show girls and an exciting eight-piece orchestra.

The "Canadian Hoedown", scheduled for Wednesday evening, October 26, will give Congress delegates and friends the opportunity to join in a good old fashioned country hoedown with lots of fine food, music, dancing and laughter. The hoedown will be held in the Sheraton Centre Ballroom and will feature Canada's top country band from the highly rated T.V. show "Grand Olde Country". The "Roland Hoedown Dancers" will be on hand to set the pace for you to kick up your heels and enjoy yourself country-style.

The Congress scientific and social program will be complemented by a full and exciting program for the Ladies featuring special luncheons, fashion shows and sightseeing tours.

Another major highlight of the Congress program is the International Dental Trade Exhibition to be held in the Automotive Building, Exhibition

Place, October 23-27. Delegates will be able to view the latest in equipment, supplies and services offered by exhibitors from France, Germany, Italy, Japan, Switzerland, the United Kingdom, the United States and, of course, Canada.

Congress delegates will have no difficulty filling their leisure time in Toronto. In fact, their problem will be just the opposite — finding enough time to see everything the City has to offer. Museums, cinemas, art galleries, open-air markets, high fashion boutiques and sidewalk cafes abound in the downtown area. Ballet, opera, concerts and folk festivals compete for attention as do the hundreds of ethnic restaurants, nightclubs and the largest collection of "off Broadway" style theatres outside New York.

Toronto has something for everyone and guarantees no visitor will go home disappointed. Mark your calendar now for October 22-28, 1977. The 65th Annual World Dental Congress is one meeting you can't afford to miss.

"A good old-fashioned Canadian Hoedown"





Dr. M. Truuvert



Dr. K. W. Stephens



Dr. G. de Farill

CARIES CONTROL AND PREVENTION IN CHILDREN

Lecturers from Scotland, Sweden, Mexico and Canada will take part in a symposium on "caries control and prevention in children" scheduled for Tuesday afternoon, October 25, at the Automotive Building, Exhibition Place.

Dr. Kenneth W. Stephen, Senior Lecturer, Department of Oral Medicine, and Head of the Preventive Dentistry and Periodontology Unit at the University of Glasgow, Scotland, will discuss fissure sealants in caries control. Dr. Stephen currently holds five research grants: two for investigations on topical fluorides and three for work on fissure sealants.

During his presentation, he will outline the development of sealant materials and systems, concentrating on the great variations which were obtained when different groups used these new techniques in attempts to seal, under clinical conditions, the erupting teeth of younger subjects. In view of the poor retention rates reported from 1974 onwards, a series of laboratory and clinical investigations was instituted in an attempt to determine whether sealing could be applied successfully to the erupting first permanent molar. Dr. Stephen will report on two major studies carried out in the past two

years. Different UV light sources will be reviewed and information will be provided on some physical comparisons of various sealants.

The second speaker on this symposium, Dr. Maret Truuvert, will focus on diet evaluation and counselling. Dr. Truuvert is Assistant Professor of Preventive Dentistry at the University of Toronto and the author of a number of articles on the importance of proper nutrition in the prevention of caries.

In caries prevention the right diet is close to, or equal to, fluoridation in importance. This is particularly true in infants and young children. In prevention of periodontal disease the link between diet and disease is not yet clearly established, but more and more clinicians are beginning to examine this link and Dr. Truuvert feels sure that scientific proof will soon be available.

She maintains that leading the patient to some changes in diet is not difficult at all, yet few practitioners take advantage of this obvious and easy measure in dental disease prevention. Her presentation will outline possible reasons for hesitation among dentists in using this approach, how to overcome them, and how to introduce and use successful diet counselling in every dental office. Emphasis will be on a

procedure that is practical, easy to implement and, most important of all, yields results.

The other two participants in this symposium are Dr. Per Torell of Sweden and Dr. Georgina de Farill of Mexico. Dr. Torell will discuss topical fluorides in caries prevention and Dr. de Farill will deal with space maintenance as a preventive measure.

Session will deal with the impacted third molar

The International Association of Oral Surgeons will sponsor a symposium on "the impacted third molar" on Thursday morning, October 27. Dr. Paul Chapnick of Canada will be chairman of this symposium which will feature the following speakers and topics: Dr. B. Azaz, Israel, "why remove the impacted molar?"; Dr. A. Antoni, Bahamas, "surgical techniques"; Dr. J. Rud, Denmark, "the lingual technique"; Dr. J. Weisenbaugh, USA, "complications and their treatment"; and, Dr. B. Fickling, United Kingdom, "the dentigerous cyst and the impacted third molar".

Now...your one-stop source for the complete, coordinated dental operator system.



Belmont 040... the new
standard of excellence
in Dental lights.



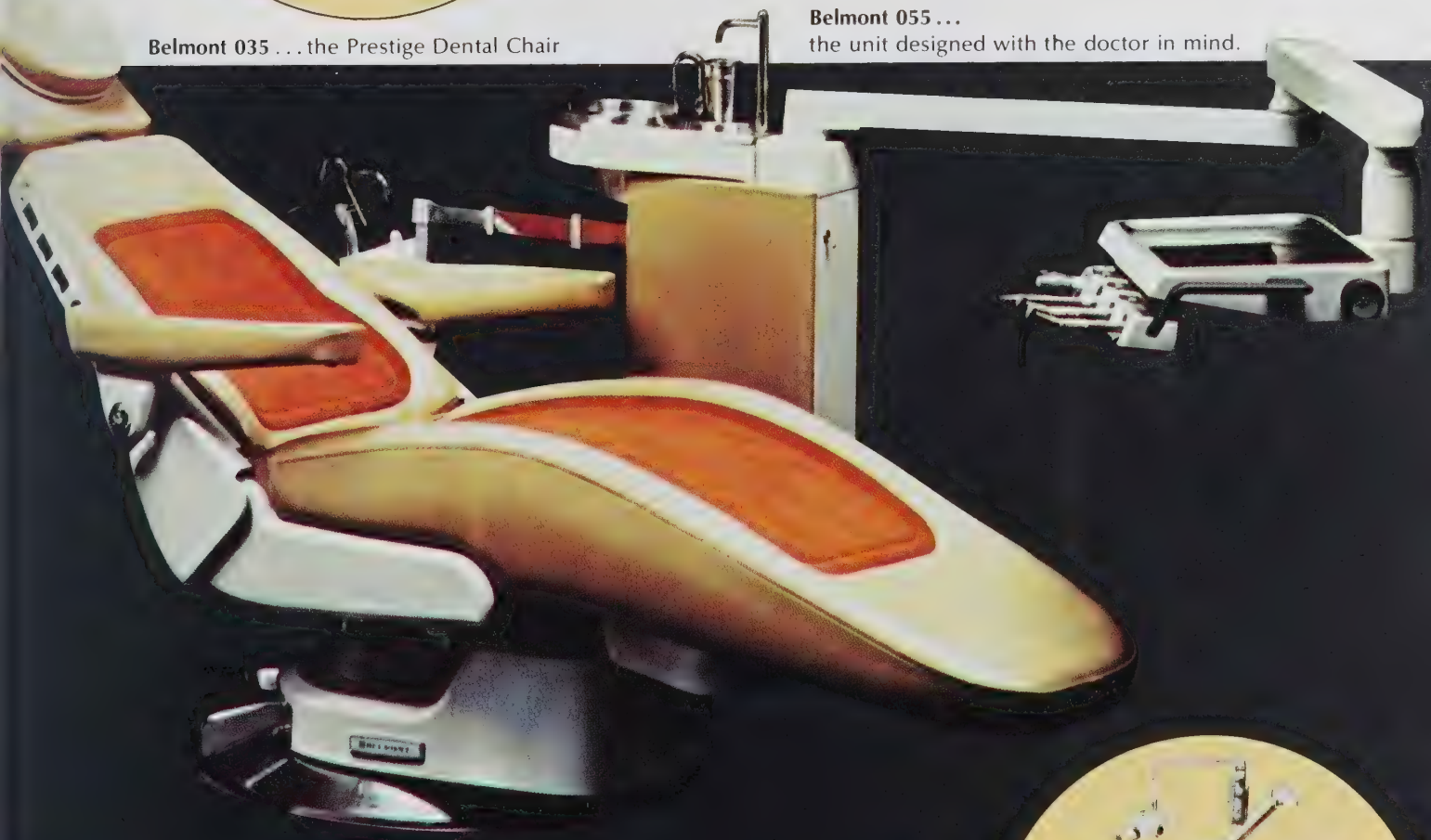
Belmont 065 X-Ray...
the Compact One

Now... Belmont offers you a simple but unique concept in operator systems. Each quality component is designed separately but engineered to work together to bring you the newest advances in patient and Doctor comfort and operating ease. From the most automated of dental chairs to the advanced features of the x-ray, dental unit and light, you can be sure that each product in the Belmont system meets the highest standards for value, performance and reliability. Standards that have been a Belmont tradition for over 50 years.

Belmont 035... the Prestige Dental Chair

Belmont 055...

the unit designed with the doctor in mind.



your Belmont Dealer, or write:

Belmont

KARA CANADA LTD.
76 South Sheridan Way
Mississauga, Ontario L5J 2M4



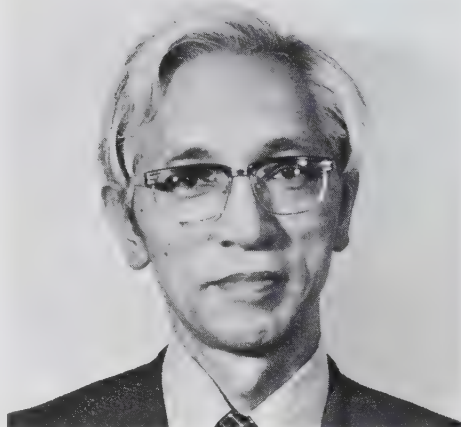
Belmont 2035...
the Prestige Dental
Operator System

THE HARMFUL ENVIRONMENT OF THE MOUTH

"The harmful environment in and around the mouth" is the topic of a lecture to be presented during the World Dental Congress by Dr. Jun Ishikawa of Japan. The lecture is scheduled for Monday afternoon, October 24, at the Royal York Hotel.

In order to differentiate between the relative effects of local and systemic factors on periodontal disease, Dr. Ishikawa will report on a series of clinical and experimental studies of hyperplastic gingivitis associated with Dilatin administration. The results of these studies will be used to support his attitude that local factors are of greater importance.

To further support this thesis, the result of investigation of the oral condi-



Dr. J. Ishikawa

tion of 309 wild and captive monkeys will be presented to suggest that both dental caries and periodontal disease are products of the cultures in which they are most commonly found.

Other factors in oral disease which will be discussed include the problem of imprinting preferential taste for sweet foods on infants, the effect of soft-cooked foods, the nature of host-parasite relationships in the mouth and a re-examination of the why and how of tooth brushing.

Dr. Ishikawa is Professor and Chairman of the Department of Periodontology, School of Dentistry, Hokkaido University. The author of a number of books and scientific papers, Dr. Ishikawa is a past president of the Japanese Society of Periodontology and a member of the American Academy of Periodontology and the International Association of Dental Research.

INTERNATIONAL DENTAL TRADE EXHIBITION

The 1977 International Dental Trade Exhibition, an integral part of the World Dental Congress, will provide a comprehensive display of dental equipment, instruments, materials, furnishings, publications and many related accessories and services. The Exhibition will be located in the Automotive Building, Exhibition Place, and complimentary shuttle bus service will be available between the Automotive Building and three downtown locations — the Royal York Hotel, the Harbour Castle Hilton Hotel and the Sheraton Centre. Buses will run at approximately 30 minute intervals.

The International Dental Trade Exhibition will officially open on Sunday, October 23, and will run through Thursday, October 27.

The following companies will take part in the Exhibition. This is a preliminary list of Exhibitors, current only to Journal press time.

Aurum Ceramic Dental Labs. Ltd.

A-Dec, Inc.

Amadent/American Medical Dental Corp.

AMK Berlin

Ash Temple Ltd.

Ada Products, Inc.

Amalgamated Dental.

Americana X-Ray Corp.

Astra Chemicals Ltd.

American Dental Mfg. Co.

American Tooth Mfg. Co. / Regal Dental Corp.

Ando Dental Labs.

Aledyne Corp.

Borrow Dental Milk Foundation.

John O. Butler Co.

Block Drug Co. (Canada) Ltd.

Columbia Dentoform Corp.

The L.D. Caulk Co. of Canada.

C.M.L. Medical Leasing Service.

Central Dental Ltd.

Cox Systems Ltd.

Colgate-Palmolive Canada.

Ceramco Inc.

Cooper Laboratories Ltd.

Chayes Virginia Inc.

Coe Laboratories Inc.

Canadent Manufacturing Ltd.

Dentsply Canada Ltd.

Denco.

Deflect-O Products Ltd.

Denar Corp.

Demetron Research Corp.

Duro-Test Electric Ltd.

Den-Mat Inc.

Den-Tal-Ez Mfg. Co. (Iowa)

Degussa Inc./Kulzer Co. GmbH.

Wolfgang Degenfelder.

Dentafacts Ltd. (Medifacts)

Den-Tal-Ez Mfg. Co. (Ohio)

Encyclopaedia Britannica Publications Ltd.

E.S.P.E. (Division Ash Tempe)

Ellman Dental Mfg. Co.

Fraser Sweatman Inc.

Futurecraft Corp.

Great Lakes Orthodontic Products Inc.

G-C Dental Industrial Corp.

Hu-Friedy Manufacturing Co. Inc.

Healthco (Canada) Ltd.

Hoyt Laboratories (Div. Colgate)

Harper and Row Publishers Inc.

Internat Services Inc. (Phaselloy).

Inland Dental Distributors.

Inter-Unitek Canada Ltd.

Johnson and Johnson Ltd.

J.F. Jelenko and Co.

Beautiful and tough.

Caulk[®] has what it takes.

Caulk[®] Characterized Lucitone[™]

for unsurpassed
denture esthetics.



Caulk[®] Lucitone[®] 199[™]

for unsurpassed
denture toughness.



For more
information
check number 101

AM

Life can be beautiful when you prescribe Caulk Characterized Lucitone.

For patients who want the ultimate in lifelike translucence, gingival shading and vein simulation in realistic dentures, it's Caulk Characterized Lucitone. The difference between an ordinary "pink denture" and Characterized Lucitone is unmistakable to the anxious patient. Patients want to be beautiful. Naturally.

For the hard knocks in life prescribe Caulk Lucitone 199.

For patients who take a lot of hard knocks in life, lifelike Caulk Lucitone 199 is the one. It combines a polymer (rigid plastic) with an elastomer, to provide great impact strength, offering protection against accidental damage. Naturally.

**These products are available upon your prescription
from better dental laboratories.**



MANAGEMENT OF FACIAL TRAUMA IN HOSPITAL

Four top Canadian speakers will participate in a symposium dealing with "management of facial trauma in hospital" on Monday afternoon, October 24, in the Automotive Building.

Dr. William C. Stephens will discuss the role of endodontics in the hospital, outlining emergency and post emergency treatment and using slides to illustrate: the completely avulsed tooth; fractures involving the crowns and roots of teeth; and apexification.

Dr. Stephens received his DDS from the University of Toronto in 1965 and his BSc in Dentistry from the same university's Department of Endodontics in 1972. He operates a practice in Agincourt, Ontario, limited to endodontics.

Dr. Lawrence Hausman, a 1957

dental graduate of the University of Toronto, will deal with the cosmetic management of anterior fractures. Dr. Hausman operates a private practice in Scarborough, Ontario, and is a member of the Academy of General Dentistry as well as various local societies dealing with crown and bridge, endodontia and restorative dentistry.

Dr. Victor Moncarz will discuss the role of the oral surgeon. A 1969 dental graduate of the University of Toronto,

Dr. Moncarz received his diploma in oral surgery from the same university in 1973. He is a Diplomate of the American Board of Oral Surgery and operates a private practice in Toronto.

Dr. Ray Mulrooney will examine the prosthetic contribution in the management of facial trauma in the hospital.

Dr. Mulrooney received his DDS from the University of Toronto in 1954 and his BScD in 1963. He is a member of the Canadian Academy of Prosthodontics, the American Equilibration Society and the Canadian Dental Association's Council on Hospital Services.

Dr. Mulrooney is Chief of Dentistry at Scarborough General Hospital and each of the other symposium participants is on the staff of the hospital. Scarborough General Hospital has, for many years, had the highest volume of emergency patients of any hospital in Ontario. Because of its proximity to two major highways and the large school population of the area it serves, much of the volume of emergency cases are victims of motor vehicle and sports related accidents.

AUTOMOTIVE BUILDING, EXHIBITION PLACE

Kerr Canada.
Lee Pharmaceuticals.
Lux and Swingenberger.
Laboratoires Dentoria.
The Medi-Dent Service.
Medidenta Dental Supply.
Mardan Business Systems Ltd.
Marco Dental Products Inc.
3M Canada Ltd.
J. Morita Corp.
Modular Custom Cabinets Ltd.
Midwest American Dental.
The Mogul Corporation/Mogul-Ed Division.
MPL Inc.
Mizzy Inc.
Moyco Industries Inc.
Nobilium Products of Canada Ltd.
North Pacific Dental, Inc.
National Refining Co. Ltd.
Novocol Chemical Mfg. Co. Ltd.
National Dental Engineers and Manufacturers.
Osada Electric Co. Ltd.
Odonto Corp. Ltd.
Pascall Co. Inc.
Prodonta S.A.
Pfingst and Co. Inc.

E.J. Pow Laboratories Ltd.
Vic Pollard Dental Products Inc.
Pacemaker Corp.
The Procter and Gamble Co. of Canada Ltd.
P.S.A. Inc.
Prodenta Co. Ltd.
Pulpdent Corp. of America.
Pelton and Crane.
Premier Dental Prods.
Phone Ware Inc.
Pentraco Ltd.
Rainbow Systems.
Roi-Vacudent.
Rinn Corp.
Rocky Mountain/Orthodontics Canada Ltd.
Reliance Dental Mfg. Co.
Siemens AG/Siemens Electric Ltd.
Shofu Dental Corp.
Sterngold.
Silver Manufacturing Co.
Sudler and Hennessey Inc.
Septodont Specialties.
Star Dental Mfg. Co. Inc.
Silvermn's.
W.B. Saunders Co. Canada Ltd.
Southeastern Coin Exchange.

Sarnia Dental Supply/Niagara Dental Supply
Karl Schumacher Dental Instrument Co. Inc.
Takara Co. Canada Ltd.
Technodent Industries Ltd.
Tri-Hawk International.
Ticonium Co. and Vernon Benshoff Co. Inc.
Tele-Com Office Products Inc.
Teledyne Water Pik Ltd.
Theta Corp.
Times Mirror International/Medical.
Uniform World.
Van R Dental Products Inc.
Weil Dental Supplies Ltd.
Wm. Wrigley Jr. Co. Ltd.
Whaledent International.
Whip-Mix Corp.
S.S. White Dental Division (Pennwalt of Canada Ltd.)
Wright Dental Canada Ltd.
Williams Gold Refining Co. of Canada Ltd.
G.H. Wood and Co. Ltd.
The Yoshida Dental Mfg. Co. Ltd.
Young Dental Manufacturing Co.

SYMPOSIUM WILL FOCUS ON ENDODONTICS

"Endodontics Today" is the theme of a major symposium to be held Thursday afternoon, October 27, at the Royal York Hotel. Dr. George C. Hare, a Toronto endodontist, will be chairman of the session.

The first speaker, Dr. Henry D. Prensky of Mexico, will discuss the multiple uses of calcium hydroxide in current endodontics. His presentation will provide a brief historical review, going back to the first decade of the century, of the various uses of calcium hydroxide in both vital and non-vital pulp therapy. The main emphasis will be on its application in various endodontic procedures and these will include: apexification; treatment of internal and external resorption and perforations; its use in fracture and avulsion situations; and its efficacy as an intracanal dressing in pulpless teeth, particularly those with large periapical lesions. Consideration will be given to possible modes of action of the material as well as comparisons, in certain

instances, of alternative therapies to accomplish similar ends.

A 1943 dental graduate of the University of Pennsylvania, Dr. Prensky is an internationally renowned author and lecturer. He is an active member of many dental organizations including the American and Mexican Associations of Endodontists, the International College of Dentists and the Pierre Fauchard Academy. He is a Fellow of the Royal Society of Medicine and a Diplomat of the American Board of Endodontics.

Dr. Calvin D. Torneck of Canada, the second speaker, will focus on endodontic/periodontic therapy of affected teeth. Alterations to the morphology of the dental crown and root are often required when treatment is performed on teeth affected by periodontal disease. Endodontic treatment is necessary for such teeth to facilitate these alterations and to minimize the incidence of post-operative complications.

During this presentation the various

types of surgical procedures used in combined endodontic/periodontic therapy will be described and discussed. These will include root amputation, hemisection and extraction and hemisection and reassembly.

Dr. Torneck received his DDS from the University of Toronto in 1958 and his MS in Endodontics from the University of Michigan in 1959. He is fellow of the Royal College of Dentists of Canada and of the American Association of Endodontists and a Diplomat of the American Board of Endodontics. An active member of many professional organizations, Dr. Torneck is currently President of the American Board of Endodontics and Consultant to the Standards Council of Canada. He has also gained an international reputation as an author and lecturer.

Dr. Louis I. Grossman of the United States is the third speaker on this symposium and he will deal with root canal obturation operations. During his presentation, the properties of particle size, flow, setting time, adhesion, solubility, dimensional change, and antimicrobial effect of 12 commercial root canal cements will be discussed. In addition, a comparison will be made of lateral condensation and vertical condensation (warm gretta percha) techniques.

Dr. Grossman is Emeritus Professor and Director of Postdoctoral Endodontic Research at the University of Pennsylvania's School of Dental Medicine and has given continuation courses at many dental schools throughout the United States, in several Latin American countries and in Europe. He is the author of more than 150 scientific papers and of four textbooks on endodontics. Dr. Grossman is active in a large number of professional organizations and is an honorary member of several international associations and societies.

Dr. Y. Shouji of Japan is the final speaker on this symposium. He will examine performance principles in endodontics.

Congress Dinner and Ball: "The Fabulous 30's" — satin, top hats and chorus lines



Professional Products for Modern Dentistry

AMALGAM WELL

Carrier loading with one hand is now possible with our heavy, solid metal well which has a specially designed, polished curvature that guides the carrier to the amalgam. The well is weighted to prevent slipping.



BEAD STERILIZER

Producing automatically controlled temperatures between 470°-500°F, the Buffalo glass bead sterilizer will quickly sterilize root canal reamers, files, broaches and absorbent points. Developed especially for endodontic applications, the fully insulated sterilizer is evenly heated during each cycle, and a control light signals when correct temperatures have been reached. The compact unit is of attractive, wood grained vinyl-clad steel construction.



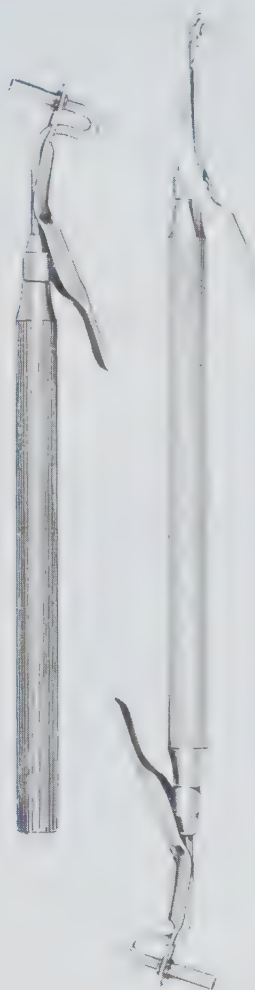
RAPID DEVELOPER

When the rapid processing and reading of a single film is essential in a dental procedure, Collit's X-ray Developer provides a reliable 15 second technic. Endodontic point position, root canals and emergency procedures can be quickly and accurately assessed. The jar is a miniature developing tank. Activated solution is useable for one to three months.



AMALGAM CARRIERS

With smooth-action nylon nozzles which prevent clogging, our featherweight stainless steel lever type amalgam carriers offer a significant improvement over ordinary carriers. Weighing no more than an ounce, and having especially responsive lever action, they reduce fatigue. The knurled handle design assures a positive grip at all times. Lever type amalgam carriers are offered in three sizes each, single or double end, and may be ordered with conventional steel nozzles if desired. Non-clogging Buffalo carriers are time-saving and easy to use, providing greater efficiency in amalgam restorative procedures.



PLUNGER TYPE

For a plunger type amalgam carrier that will not clog, you can use the Buffalo with confidence. Our specially designed nylon nozzle prevents any amalgam build-up, assuring full operating efficiency at all times. All interior parts are stainless steel, with chrome-plated brass exterior, providing years of trouble-free service. Carriers can be ordered with conventional steel nozzles, and are available in a choice of regular or large sizes.



Buffalo

Dental Mfg. Co.
52 Chauncey Ave., Toronto M8Z 2Z4 Ontario

Instructions to Contributors

The Journal of the Canadian Dental Association is currently soliciting research and clinical articles for publication. Interested contributors are asked to use the following outline of requirements when preparing manuscripts.

Manuscripts: Manuscripts should be submitted to the editor with a covering letter requesting consideration for publication in the Journal. Send two copies — original and a carbon — typewritten with all material (text, quotations, tables, legends, references, etc.) double-spaced, on one side of the sheet, $8\frac{1}{2} \times 11$ inches, with ample margins on all four sides. The author should always retain a carbon copy of material submitted. Every article should contain a summary of the contents.

Original articles are considered and accepted subject to the understanding that they are submitted solely to this Journal, and will not be reprinted without the consent of both the editor and the author.

The editor reserves the right to fit articles within the space available and to make usual editorial alterations in manuscripts; these include such changes as are necessary to ensure correctness of grammar and spelling, clarification of obscurities or conformity to Journal style. In no case will major changes be made without prior consultation with the author. The senior author will receive either the edited manuscript or galley proofs for checking prior to publication.

Article Titles Make article titles descriptive but as concise as possible. Long titles discourage reading, present

typographical and layout problems and create difficulties in library indexing.

References: Authors should limit references to published work to the minimum necessary for guidance to readers wishing to study the subject further. They should not quote articles they have never seen. Except in review articles, the maximum number of references should not be more than 25. References should be numbered in the text and should be set out in a separate numbered list at the end of the article.

For journal references, give the author's name, article title, journal name, volume number, first page of article, and year of publication:

1. Gibb, G. H. Methods of achieving improved amalgam restorations. *J Canad Dent Ass* 30:413, 1964.

For books give the author's name, book title, location and name of publisher, year of publication:

2. Kilpatrick, H. C. *Work simplification in dentistry*. Ed. 2. Philadelphia, Saunders, 1964.

Illustrations: Line and halftone illustrations should be of high quality for satisfactory reproduction.

Photographs — Handle photographs carefully. Do not bend, fold or use paper-clips. Photographs should be unmounted, untrimmed, good, sharp, black and white glossy prints, preferably not larger than 10×8 inches. Color work can only be published at the author's expense. Magnification of photomicrographs must always be given. Photographs must not be written on or typed on. On the back of each photograph, very lightly and in pencil, write the author's name, the figure number and indicate the top edge. If a

figure contains two or more photographs, do not mount the parts; on the back of each photograph write very lightly in pencil the figure number and part letter (Figure 1a, etc.) and indicate the top edge. Patients must not be recognizable unless the written consent of the subject to publication has been obtained.

Drawings — Figures, graphs, charts and diagrams should be drawn and lettered in india ink. Lettering must be large enough to be read after the drawings are reduced to column width (small, simple drawings) or page width (larger, more complex drawings).

Legends — Figure legends should be typed as a group on a separate sheet. They should be separate from the text of the article and from the illustrations.

Tables: Each table should be typed on a separate sheet. Tables should be numbered consecutively and tailored to fit within column width or page width. Table title and table footnotes should be on the same page with the table. Do not show vertical rules in tables.

Permission and Waivers: These should accompany the manuscript when it is submitted for publication. Permission of author and publisher must be obtained for the direct use of material (text, photos, drawings) under copyright that is not your own. Up to one hundred words of prose material usually can be quoted without getting permission, provided the material quoted is not the essence of the complete work. Waivers must also be obtained for the publication of photographs showing persons, unless faces are masked to prevent identification. Waiver forms are available from the editor.



Orbit with Xylitol:

A New Generation of Sugar Free Gum

Now Orbit with Xylitol, the remarkable natural sweetener, is completely sugar and saccharin free. Xylitol, a white crystalline powder that looks like sugar is commonly found in fruits such as berries and strawberries, and has recently been approved for use in Canada. There is growing interest in Xylitol as a sweetener, as Xylitol may have anti-cariogenic properties as it relates to teeth. Until the proper authorities in Canada confirm the original findings of possible beneficial properties of Xylitol, the Wrigley Company will not make claims of these properties.

Xylitol was first prepared in 1891. But because the extraction process was complicated and expensive, it was not available in quantity until recently. Xylitol is comparable in sweetness to sugar and is as sweet as some popular sugar substitutes. In Orbit chewing gum, Xylitol creates a pleasant tingling effect to make it very refreshing.

Orbit made with Xylitol will be available in three popular flavours, spearmint, peppermint and cinnamon.

Now that Orbit contains Xylitol, don't tell your patients not to chew, tell them what to chew.



65ème CONGRÈS DENTAIRE MONDIAL ANNUEL

TORONTO, 22-28 OCTOBRE, 1977

Les sons émouvants des cornemuses et tambours du 48ème Régiment écossais du Canada rehausseront la pompe des cérémonies d'inauguration qui lanceront officiellement le 65ème Congrès dentaire mondial annuel. Des dignitaires, à l'échelle nationale et internationale, participeront aux cérémonies officielles qui auront lieu le dimanche 23 octobre à 19 heures à l'imposant Centre des Congrès Harbour Castle. Le programme officiel sera suivi d'une dégustation de vins et fromages, où règnera une atmosphère totalement détendue.

La participation du 48ème Régiment constitue un choix très judicieux. Constitué en 1891, le Régiment a pour devise "Dileas Gu Brath" (Fidèle à jamais), et reflète, depuis ses débuts, une tradition de service et de sacrifice envers le pays. Les tambours portent le tartan vert foncé Davidson, en l'honneur de son premier commandant, alors que les joueurs de cornemuse portent un tartan contrastant rouge vif, le

Stewart of Fingask. Les cornemuses et tambours du 48ème Régiment écossais, orchestre de renommée internationale, sont très fiers de leur digne héritage et la musique qu'ils jouent est sans égal.

Le banquet et bal du Congrès, événement saillant du programme mondain, aura lieu le mardi soir, 25 octobre, à l'Hôtel Royal York. Cette soirée d'apparat comprendra un dîner gastronomique, un bal et un spectacle "aux fabuleuses années '30" et présentera une perspective énergique, spirituelle et satirique de l'ère du satin, du chapeau haut-de-forme et des "girls" Busby Berkeley. En vedette, six belles danseuses à claquettes et trois grands artistes canadiens, appuyés d'un orchestre composé de huit musiciens, tous costumés de façon impressionnante, et prêts à jouer musique, encore musique, toujours musique. . . .

Le spectacle, dirigé par Michael Steel — mise en scène et chorégraphie par Roland — présentera les anciens favoris "We're in the Money", "42nd

Street", et "Happy days are here Again".

La "Soirée à la Canadienne", prévue le mercredi soir, 26 octobre, procurera aux délégués l'occasion de passer une soirée comme "au bon vieux temps"; on mangera, on dansera et on s'amusera. Cette soirée aura lieu à la salle de bal du Centre Sheraton et mettra en vedette le fameux orchestre canadien de musique populaire du programme de télévision très coté: "Grand Olde Country". Les "Roland Hoddin Dancers" mèneront la danse et vous pourrez les suivre au rythme des violons.

En plus du programme mondain, un attrayant programme féminin est organisé, et l'on prévoit déjeuners, défilés de mode et excursions.

Inscrivez dès maintenant sur votre calendrier les jours du 22 au 28 octobre 1977. Le 65ème Congrès dentaire mondial est un événement que vous ne pouvez vous permettre de manquer.

UNE BIENVENUE CANADIENNE

Lors du congrès de la FDI à Toronto, deux zones d'accueil seront mises à la disposition des dames: elles pourront s'y détendre, boire avec leurs amies une bonne tasse de café et faire des nouvelles connaissances.

Au siège social du congrès, à l'élégant Hôtel Royal York, il y aura une suite d'accueil où les dames pourront déguster, à titre gracieux, nos fruits, vins, fromages et pâtisseries canadiens.

A l'"Automotive Building, Exhibition Place", il y aura une exposition d'artisanat et de travaux créés par les dentistes et leurs épouses pendant leurs heures de loisir. Dans les parages, il y

aura également une salle d'accueil où les dames pourront aller boire un café et se reposer un peu.

Les membres du Comité d'accueil vous invitent à fréquenter ces salles d'accueil aussi souvent que vous en aurez envie afin de leur permettre de vous prouver combien ils apprécient votre présence au congrès. Il y aura des petits cadeaux ainsi que des tirages de loteries.

Les hôtes, sous la direction de Mme Wanda Kamienski, sont les épouses multilingues des dentistes. Elles sont toutes prêtes à vous aider à faire de cette visite au Congrès mondial un événement inoubliable.

Inscrivez-vous aujourd'hui même

N'attendez pas. L'on prévoit que le nombre des participants au Congrès battra tous les records et il est vivement recommandé de s'inscrire au plus vite. Pour faciliter la procédure, vous trouverez à l'arrière de ce numéro, des formules d'inscription et de réservation de chambre. Veuillez en remplir une et la retourner, accompagnée de votre chèque, dès aujourd'hui. Le Canada accueillera le Congrès dentaire mondial pour la première fois. Soyez bien sûr d'y assister!

“DENTISTERIE OPERATOIRE”: THEME DU COLLOQUE FRANCOPHONE

“Dentisterie opératoire”: voici le thème d'un important colloque francophone, prévu pour mercredi le 26 octobre, de 14h à 17h, à la Salle de Bal de l'Hôtel Royal York.

Le Dr Denis Forest, de l'Université de Montréal, présidera le colloque.

Le premier de ces conférenciers, le Dr Pierre Desautels de la Faculté de médecine dentaire de l'Université de Montréal prononcera une conférence intitulée “Évaluation clinique de quatre amalgames commerciaux à haute teneur en cuivre”.

Depuis plus de cent ans, l'amalgame dentaire a été le matériau de restauration de dents individuelles le plus souvent utilisé: en fait, il semble qu'il ait servi aux trois-quarts de toutes les restaurations. Ceci probablement grâce à l'heureuse combinaison de ses excellentes propriétés mécaniques et d'une technique facile. De plus, l'amalgame a toujours offert un grand avantage par le fait qu'après quelques semaines, il offre un scellement parfait, avec comme résultat, une excellente résistance contre la récurrence de la carie. Malgré son usage continu, l'amalgame a cependant toujours été reconnu comme étant déficient du point de vue “force après une heure”, “résistance à la corrosion” et “fracture marginale”.

Récemment, les amalgames dentaires ont été considérablement améliorés par l'introduction d'alliages à plus haute teneur en cuivre. Il a été démontré in vitro que ces nouveaux amalgames offraient des propriétés supérieures, particulièrement aux trois points de vue mentionnés plus haut.

Dispersalloy, Tytin, Indiloy et Oralloy furent investigués in vivo et les premiers résultats seront rapportés dans cette présentation.

Professeur agrégé à la Faculté de médecine dentaire à l'Université de Montréal, le Dr Desautels est chargé de l'enseignement des matériaux dentaires. Il est président du Comité de recherche de la Faculté de médecine

dentaire; président du Comité de l'Association canadienne de normalisation; et responsable canadien du groupe de travail 3 de l'ISO. Le Dr Desautels fait également partie du Conseil des matériaux dentaires de l'Association dentaire canadienne.

Le Dr Pierre-Paul Giroux de l'Université Laval prononcera la deuxième conférence sur l'“Application des principes de base de la préparation des cavités et l'utilisation de tenons dans les cas de restaurations extensives en amalgame.”

La fracture de l'amalgame ou de la dent et le délogement de la restauration demeurent un problème actuel dans les cas de restaurations extensives. Ces échecs sont attribuables à la faible résistance en tension du matériau amalgame et à la préparation inadéquate de la cavité au niveau de la forme de résistance et de rétention. Notre principal objectif est de prévenir la fracture du matériau amalgame ou de la dent et le délogement de la restauration. Les solutions envisagées pour résoudre ce problème sont les suivantes: la recherche d'une bonne forme de résistance et de rétention; la profondeur de la cavité, l'épaisseur du matériau; et l'utilisation judicieuse de tenons.

La conférence du Dr Giroux traitera du besoin, du type, de l'emplacement et du nombre de tenons. Il y aura une présentation de quelques cas cliniques ainsi que de diagrammes sur différents types de préparation de cavités extensives représentant une variété de situations cliniques et l'analyse de chacune de ces cavités quant à leur forme de résistance et de rétention.

Diplômé de la Faculté de médecine dentaire de l'Université de Montréal en 1965, le Dr Giroux obtint en 1970 un MSD en dentisterie opératoire à l'Indiana University. Il est professeur à la Section dentisterie opératoire à l'École de médecine dentaire de l'Université Laval depuis 1973. Il était préalablement professeur au département de

Restauration, section dentisterie opératoire, Faculté de médecine dentaire, Université de Montréal. Conférencier renommé, le Dr Giroux participe activement aux diverses associations dentaires. En 1975-76, il était vice-président de l'Association des dentistes-cliniciens-enseignants de l'École de médecine dentaire de l'Université Laval; il est actuellement conseiller à ce même organisme. Il fait également partie de l'Association dentaire canadienne, de l'Ordre des dentistes du Québec et de la Société dentaire de Québec. La troisième conférence du colloque sera une présentation conjointe des Drs H. Sahel et Y. Simonpaoli de France; elle traitera de l'“Importance des céramo nickel”; il y aura une discussion des applications cliniques actuelles en prothèse céramo-métallique.

L'importance des nouveaux alliages base nickel est apparue il y a une dizaine d'années. Les Drs Sahel et Simonpaoli ont remplacé dans leur pratique quotidienne les alliages d'or par un alliage nichel chrome, tant en prothèse fixée élaborée qu'en prothèse céramo-métallique. Leur décision reposait sur les facteurs suivants: les propriétés mécaniques remarquables de cet alliage (en particulier sa rigidité très élevée); sa coulabilité exemplaire; sa bonne aptitude au polissage; son inoxydabilité en bouche; son accord parfait en dilatation avec les porcelaines dentaires.

Les Drs Sahel et Simonpaoli signalent que la technique d'emploi de cet alliage est simple et que pour une période de dix ans, les échecs ne dépassent pas un pour cent.

Après une étude sommaire des matériaux, les conférenciers traiteront principalement de la technologie au laboratoire et présenteront quelques cas cliniques — les uns simples, les autres plus complexes.

Docteur en Sciences odontolo-

Suite à la page 428



Orbit avec Xylitol:

La nouvelle découverte de la gomme sans sucre

Maintenant Orbit avec xylitol, l'incomparable édulcorant naturel, est sans sucre et sans saccharine. Xylitol, une poudre cristalline blanche qui ressemble au sucre est ordinairement trouvé dans fruits tels que fraises et framboises et fut tout récemment approuvé au Canada. Un point intéressant qui concerne xylitol comme édulcorant, est que possiblement il pourrait contenir des propriétés variées concernant les dents. Cependant, jusqu'à ce que les résultats des expérimentations soient confirmés par les autorités au Canada, la Compagnie Wrigley ne se prononcera pas à ce sujet.

Xylitol fut préparé pour la première fois en 1891. Mais parce que le procédé d'extraction était compliqué et aussi très dispendieux, xylitol n'était pas disponible en quantité jusqu'à maintenant. Au point de vue goût, xylitol se compare au sucre et il est aussi deux fois plus sucré que d'autres succédanés de sucre. Dans la gomme à mâcher Orbit, xylitol lui donne un goût plaisant et rafraîchissant.

Orbit avec xylitol sera encore disponible en les trois saveurs les plus populaires; menthe verte, menthe et cannelle.

Maintenant qu'Orbit contient xylitol, ne dites pas à vos patients de ne pas mâcher, dites-leur de bien mâcher.

LA PLANIFICATION DE LA DENTISTERIE

Depuis que la structure sociale implique la technocratie dans la profession dentaire et compte tenu de l'irréversibilité probable de cet engagement, les problèmes de planification ne doivent pas pour autant n'être résolus qu'en dehors de la profession comme telle, en dépit de l'importance des montants alloués à la profession et aux traitements proprement dits.

Tout effort de rationalisation ou de rapprochement des parties, au cours des négociations, doit inclure la sauvegarde de l'intégrité professionnelle et individuelle. Ce sont là des pré-requis difficilement négociables, et il est dangereux de tenter d'enfermer la dentisterie à l'intérieur de pourcentages, de budgets et de prévisions sans risquer d'entraver le professionnel dans l'exercice normal de sa profession.

Il n'est pas sûr d'ailleurs que la planification de la profession dentaire par l'arithmétique soit de nature à enthousiasmer le professionnel davantage engagé par des raisonnements diagnostiques et thérapeutiques, même s'il doit ajouter à ses préoccupations la

rentabilité de son travail dont les coûts opérationnels influencent l'acte médical même.

D'autre part, on ne peut se soustraire au fait que la santé en général devient une affaire économique et que les soins dentaires sont maintenant inclus parmi les biens de consommation auxquels les individus ont droit.

Au départ, il semble donc que les positions que supposent ces données soient difficilement conciliables. D'autres faits se greffent pourtant dans cette réalité.

Plus le niveau de vie s'élève et plus la population dépense pour les soins dentaires. La dentisterie, ayant un caractère cosmétique variable selon l'économie du patient, il s'ensuit que plus la population peut dépenser plus elle réclame des soins sophistiqués et plus elle accapare le temps du dentiste qui tend à moins travailler et se rapprocher du 35 heures par semaine. Il y a quelques années, il n'était pas exceptionnel que des bureaux fonctionnent pendant plus de 50 heures par semaine. Les temps changent et les dentistes, comme tous les autres secteurs du travail, organisent leur vie en fonction d'un temps ouvrable raccourci par un besoin plus orienté qu'auparavant vers le loisir.

Le mot planification, tout séduisant qu'il soit, doit aussi tenir compte de certains autres facteurs. Si, d'un côté la planification ne vise qu'à ne pas grever des budgets, "qu'à vérifier systématiquement la compétence du professionnel en exercice," et la "qualité de l'ensemble des actes professionnels exécutés couramment par les membres de la corporation" etc... etc..., ce n'est pas une planification. Comment en effet définir la qualité d'un acte thérapeutique, comment l'évaluer financièrement lorsqu'on n'a même pas défini, au départ, ce qu'est la santé buccale? Comment juger la compétence d'un dentiste d'après un travail honnête mais que ne rencontre pas les

objectifs possibles d'un traitement plus élaboré mais inaccessible à tel ou tel patient? Comment juger la valeur d'un dentiste à partir d'un travail trop souvent rendu difficile pour le comportement du patient?

Si l'on fait exception de la chirurgie esthétique, encore que l'Etat en assume souvent les frais, le traitement médical diffère du traitement dentaire. Le chirurgien n'a pas une façon particulière de faire une gastrectomie pour tel patient. Le médecin n'a qu'une façon de soigner.

La dentisterie est différente aussi parce que son exercice est polarisé par des coûts de production, alors que ce facteur est plus constant et plus uniforme chez les médecins.

Rien n'indique, dans les propos de M. René Dussault (*Journal Dentaire du Québec*, p.5, Oct. '76), que l'Office des Professions tiendra compte des contingences qui font de la dentisterie une profession bien à part des autres et qui rendent essentielle une planification individuelle qui ne sera effective que si l'on commence par considérer les problèmes généraux de la dentisterie. Il semble que les intrusions dans la dentisterie se font à partir de raisons non avouées, et il serait préférable qu'on fasse le procès avant d'imposer ce qui peut ressembler à des sanctions qui touchent aux aspects financiers et professionnels.

Il faut noter, à cet égard, qu'un dentiste ne peut adhérer à un raisonnement budgétaire et professionnel que si ce raisonnement tient compte du fait que tel traitement s'applique à tel patient traité par tel dentiste et, on peut provoquer plus d'inconvénients que d'avantages en retirant la dimension humaine de la clinique. Il n'est enfin aucune planification qui puisse être faite quand on la commence en donnant arc et flèche aux "paras" sans situer la cible qui reste, la santé publique.

Dr. Robert Lambert

Dentisterie operatoire

Suite de la page 426

giques, le Dr Sahel est professeur de catégorie exceptionnelle. Il est président du congrès national de l'Association dentaire française et du Collège national de prothèse dento-maxillo faciale. Ancien directeur de l'École dentaire de Paris, il fait partie du Bureau exécutif de l'Académie de chirurgie-dentaire. Le Dr Sahel est un conférencier et un auteur renommé à l'échelle internationale.

Le Dr Simonpaoli est Docteur en chirurgie dentaire et en sciences odontologiques. Professeur à Paris V, il a présenté de nombreuses tables cliniques et il est l'auteur d'un grand nombre de publications sur les alliages nickel-chrome.

LES FIDUCIAIRES DU FCED APPROUVENT DES SUBVENTIONS S'ÉLEVANT À PLUS DE \$160,000

Lors de la récente assemblée annuelle du FCED, les dix membres du Conseil des fiduciaires ont approuvé une somme qui bat tous les records, soit \$161,000, destinée aux subventions de 1977 pour l'avancement de l'enseignement et de la recherche dentaires.

Dans le but de pouvoir accorder ces subventions tout en équilibrant le budget, les fiduciaires ont approuvé avec assurance des pronostics prévoyant une augmentation de 25% des revenus totaux de cette année.

Octroi de bourses: conclusions et recommandations du comité consultatif du FCED

Préalablement à l'assemblée des fiduciaires, les quatre membres du Comité consultatif sur la sélection des boursiers se sont réunis pour étudier les demandes de bourses provenant de dentistes désireux de suivre des programmes post-universitaires, dans le but d'exercer des carrières d'enseignants dans les écoles de médecine dentaire du Canada.

Malgré les contraintes financières imposées aux facultés dentaires, presque tous les candidats se sont engagés à enseigner au moins à mi-temps à la conclusion de leurs études. Le comité a donc recommandé que quinze dentistes et un non-dentiste (un enseignant d'une faculté de médecine dentaire) obtiennent des bourses s'élevant à des montants variés, selon leur intention d'enseigner à plein temps ou à mi-temps.

Le comité a également recommandé que les fiduciaires continuent à accorder une haute priorité au programme d'octroi de bourses du Fonds.

Des plus, le comité a étudié huit demandes relatives à la bourse annuelle de \$1,500 offerte par le Fonds et subventionnée par Warner-Lambert Canada Ltée. Cette bourse procure à un professeur établi de médecine dentaire l'occasion de perfectionner et d'approfondir ses connaissances dans tout domaine de l'enseignement ou de la recherche dentaires.

Le comité a souligné que ces trois dernières années, le nombre et la qualité des demandes pour cette bourse s'étaient beaucoup élevés et il a suggéré que si les fonds y suffisaient, au moins deux bourses de ce genre devraient être octroyées tous les ans.

Le comité a également étudié les demandes faites par neuf hygiénistes dentaires. Dans certains cas, les candidats enseignent déjà et sont désireux de se perfectionner, alors que d'autres désirent obtenir une formation plus approfondie afin d'être admissibles à occuper un poste d'enseignant à des écoles d'hygiène dentaire.

Après sérieuse considération, le comité consultatif a recommandé que des bourses de \$1,000 chacune, soient décernées à six hygiénistes.

Toutes les recommandations du comité ont, par la suite, été approuvées par les fiduciaires. Le programme d'octroi de bourses du Fonds pour 1977 s'élèvera à \$66,000.

Autres subventions

Programme d'accréditation de l'ADC (post-universitaire et universitaire)	\$21,000
Congrès des étudiants en médecine dentaire et programme de table clinique	\$ 7,600
Recherche, Université de Toronto — Malformations congénitales et fractures mandibulaires (subventionnée par un don de la Fondation de l'Hôpital des enfants malades de Toronto)	\$41,000
Congrès de l'ODA sur la santé dentaire	\$ 1,500
Troisième congrès international sur les fissures palatines et les anomalies cranio-faciales connexes	\$ 2,000
Congrès FDI/ADC — Programme de conférences	\$ 1,300
Congrès d'enseignement ADC/ACFD — Diagnostic physique dans l'enseignement dentaire	\$ 4,600

Fonds de dotation MacLachlan — Universités de Toronto, McGill et Dalhousie	\$ 4,000
Subventions aux facultés dentaires	\$10,000
Conseil des matériaux dentaires de l'ADC	\$ 2,000

Nominations

Les fiduciaires du FCED sont nommés pour un mandat de trois ans, renouvelable pour une deuxième période de trois ans.

Les Drs James A. Guest de London, Ontario, W. Kenneth Martin, de Regina, Saskatchewan et Basil M. Plumb de Vancouver, C.B. sont arrivés à la fin de leur premier mandat à titre de fiduciaires et tous trois ont été nommés pour un deuxième mandat.

Revenus d'exploitation

En 1976, les contributions personnelles en provenance de dentistes ont augmenté de plus de 30 pour cent. Les fiduciaires considèrent ce fait très encourageant et s'attendent à ce que cette tendance continue en 1977.

Pour que le Fonds continue à progresser, les professionnels doivent se placer en tête de file. Voilà pourquoi les fiduciaires comptent avec assurance, sur des revenus totaux s'élevant à un minimum de \$237,000.

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 31 juillet, 1977:

Fonds d'actions ordinaires	\$28,772
Fonds à revenu fixe	\$19,805
Fonds avec garantie	\$13,837

L'avoir total (valeur marchande) du régime se montait à \$26,214,905.57.

Pour de plus amples renseignements, veuillez écrire à CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ontario M5R 2P2.

CONSEQUENCES DE LA POLITIQUE GOUVERNEMENTALE SUR LES CURRICULUMS DES FACULTÉS DENTAIRES

P. Simard, DDS, DHPD
Québec

Le directeur de l'Ecole de médecine dentaire de l'Université Laval, le docteur Paul Simard, prononçait récemment à l'intention des professeurs de médecine dentaire des Universités de Montréal et Laval une conférence intitulée "La politique gouvernementale en matière de santé dentaire et son impact sur les programmes d'étude des facultés dentaires". Après avoir affirmé que "le ministère des Affaires sociales (MAS) et le ministère de l'Éducation, n'avaient pas de politique structurée relativement à la santé bucco-dentaire de la population québécoise" et que le gouvernement n'avait élaboré que des bribes de programme dont il a fait l'exposé, le docteur Simard a traité des conséquences de cette politique sur les curriculums des facultés dentaires. Nous reproduisons la dernière tranche de son exposé.

Il devient très difficile pour ne pas dire présomptueux de prévoir l'impact de la politique en matières de santé buccale sur les programmes d'étude de nos facultés, surtout au moment de l'arrivée d'un nouveau gouvernement qui n'a fait connaître que deux éléments de son action future en matière de santé dentaire, soit un régime de soins dentaires pour les moins de 19 ans et les plus de 64 ans.

Il existe quand même quelques données, quelques lignes de pensée qui permettent de dégager certaines orientations — j'aurais préféré parler des *grandes* orientations — qui devront marquer les programmes d'étude dentaires au Québec. J'en aborde donc quelques-unes à titre indicatif.

La délégation de tâches

C'est avec retard et parcimonie — et même par coercition — que la profession dentaire se départit de fonctions qui sont confiées à des auxiliaires. Cependant, comme tout courant longtemps contenu et endigué, ce phénomène prend et prendra dans les quelques années à venir une ampleur très marquée et se caractérisera par son *irréversibilité*.

L'assistante se voit attribuer des tâches jusqu'ici réservées à l'hygiéniste traditionnelle, l'hygiéniste traditionnelle laisse place à l'hygiéniste aux fonctions élargies (celles que l'on forme actuellement dans sept cegeps) et il est plus que probable que les hygiénistes thérapeutes (les infirmières dentaires) dont on connaît les prérogatives très vastes, seront implantées au Québec dans un proche avenir.

La question se pose à savoir quel sera le champ d'action du dentiste ou, comme l'on dit couramment, "que va-t-il rester au dentiste?". La réponse à cette interrogation m'apparaît de la plus évidente simplicité: il va lui rester la médecine

dentaire. D'où l'importance de décerner un DMD qui ait une signification, toute sa signification. En d'autres termes, le dentiste de demain devrait être un praticien de la médecine buccale. Il importe donc que sa formation soit la plus complète possible en pathologie, en diagnostic et en pharmacologie, pour ne citer que ces disciplines, afin que son comportement soit celui d'un médecin dentiste bien au fait de la corrélation entre la santé générale et la santé bucco-dentaire. L'on voit dès lors la métamorphose qu'il faut apporter à nos curriculums pour changer le concept du supertechnicien que nous avons trop souvent du dentiste. Ne recourt-on pas en effet de façon courante à l'expression "opérateur" — bon opérateur ou opérateur médiocre — pour qualifier les mérites d'un confrère? Il nous faut donc de toute évidence, mettre moins d'accent sur la technique dentaire au profit de la médecine dentaire. Ce ne veut pas dire pour autant qu'il faille éliminer la technique de nos programmes d'étude; au contraire. L'exercice de la dentisterie comporte une composante technique que l'on ne peut négliger et qui doit garder la place qui lui revient dans la formation du dentiste. Il nous faut donc tendre à un juste équilibre qui se situe entre les deux pôles de la super technique d'une part et de la théorie non appliquée d'autre part.

Il est une autre conséquence de la délégation de fonctions qu'il importe de souligner. C'est la possibilité qui s'offre à nous de former un généraliste qui soit vraiment un omniscient praticien dans toute l'acceptation du terme. Soit un dentiste qui ne réfère pas tous ses cas de chirurgie, à l'exception de l'avulsion des dents, à un chirurgien, ses cas de périodontite, au curetage, à un périodontiste, ses cas d'endo, sauf les incisives supérieures, à un endodontiste, les enfants un peu rébarbatifs, au pédodontiste, les cas les plus élémentaires de prévention et d'interception de la malocclusion à un orthodontiste, etc. etc. . . . La demande de plus en plus croissante de soins qui ne se limitent pas à l'obturation ou à l'avulsion des dents et à la confection de pièces de prothèse complète doit nous inciter, non pas à multiplier le nombre de spécialistes, mais bien à fournir au praticien toutes les connaissances nécessaires à l'exercice intégral de sa discipline, qui est une spécialité en soi, celle de la médecine dentaire.

L'exercice en équipe

Une étude sur les besoins dentaires au Québec,¹ parue en 1970, révélait que moins de 5% de la population était sans besoins dentaires; cette proportion s'abaissait même à 1.2% chez les sujets canadiens-français âgés de 3 à 18 ans. Par



Son traitement au fluorure est terminé. Laissez le fluorure de Colgate prendre la relève.

Le fluorure MFP* de Colgate* donne à vos clients une protection supplémentaire contre la carie, entre deux traitements.

est un fait. Nos tests cliniques ont prouvé que l'emploi **seul** de Colgate au fluorure MFP réduisait considérablement le taux de caries dentaires. Dans le cadre d'un traitement local, il devrait donc entraîner une réduction encore plus notable. Colgate au MFP présente des avantages spécifiques et importants: L'usage régulier de Colgate rend les dents plus **résistantes à la carie**. Nous croyons que le MFP

(monofluorophosphate de sodium) contenu dans Colgate parvient à transformer la couche d'apatite qui recouvre les dents, en fluorapatite (un fluorophosphate de calcium), grâce à la similarité de propriétés chimiques de ces deux substances.

2. Tandis que certains dentifrices ont tendance à tacher les dents, il est bon de savoir que Colgate avec MFP ne présente pas ce problème.

3. Colgate au MFP est reconnu pour la **stabilité de son fluorure**; même après trois ans, le monofluorophosphate de sodium reste présent et efficace.

Aussi, dès que vous aurez terminé leur traitement au fluorure, parlez à vos clients de cette protection supplémentaire que leur apporte le dentifrice Colgate au MFP. Donnez-leur une chance de plus de lutter contre la carie.



"Colgate avec MFP s'est révélé un dentifrice préventif contre la carie dentaire et son emploi peut avoir une valeur importante lorsqu'on l'utilise dans le cadre d'un programme d'hygiène buccale exécuté avec application et de soins dentaires professionnels réguliers."

L'Association Dentaire Canadienne.

Colgate-Palmolive Canada

*TM Reg'd

De belles couleurs naturelles de dents
pour la plupart des restaurations.

Le choix de teintes Trubyte® Bioform®.



Avez-vous réalisé que vous pourriez utiliser votre Guide de Teintes Bioform pour à peu près toutes les restaurations prothodontiques fixes et amovibles?

N'est-ce pas pratique? . . . et si précis en même temps.

N'oubliez pas de prescrire les produits de qualité Dentsply qui ont été fabriqués spécialement pour aller avec votre guide de teintes . . .

Les dents **TRUBYTE BIOFORM** en porcelaine et en plastique
pour des prothèses complètes et partielles.

La porcelaine **BIOBOND®** pour les couronnes et ponts.

La porcelaine à l'alumine **TRUBYTE BIOFORM** pour les couronnes.

CAULK® BIOLON® pour facettes de plastique.

Si vous ne possédez pas encore l'un des quelque 70,000 mille guides de teintes Trubyte Bioform actuellement utilisés, vous pouvez en obtenir un chez votre distributeur Dentsply.

TRUBYTE®

Dentsply Canada, Ltd. Toronto 2-B, Ontario
Tous droits réservés.

ailleurs le dernier rapport de la RAMQ indiquait qu'en 1975 seulement 25.7% des enfants de 8 ans ou moins s'étaient révalu du régime de soins dentaires gratuits. Ces données portent à croire que l'affirmation faite en 1965 dans un éditorial du Journal dentaire du Québec² à l'effet que la profession dentaire répondait à moins de 10% des besoins dentaires de la population québécoise pourrait sans doute être de nouveau avancée. Tout ceci pour réaffirmer l'urgente nécessité pour la profession dentaire de recourir à un accroissement drastique et rapide de la délégation de fonctions et par voie de conséquence de l'exercice en équipe.

Il est deux volets du travail en équipe qui se compénètrent dans les faits et que l'on distinguera cependant sous les sous-titres suivants: d'abord "le dentiste et le personnel auxiliaire," puis "le regroupement des dentistes."

Le dentiste et le personnel auxiliaire

La notion de la dentisterie à quatre mains (four-handed dentistry), que l'on enseigne à peine dans nos facultés, n'est pas en soi dépassée mais se révèle dans le contexte actuel insuffisante. L'étudiant qui graduera en 1977 devrait être capable à oeuvrer avec des hygiénistes qui accomplissent non pas seulement les fonctions traditionnelles, mais bien des tâches élargies car il s'en trouvera environ 600 sur le marché du travail et qu'à peu près 600 autres sortiront des pépés dans les 3 années subséquentes. Soit, la profession n'est pas responsable d'une telle production d'hygiénistes, mais il n'en reste pas moins qu'elle contribuera à un gaspillage inestimable de ressources si ce personnel n'est pas formé à bon escient. Et ce sera le cas si les facultés dentaires ne tiennent pas compte de cette réalité dans leur curriculum.

Le regroupement des dentistes

Les dentistes ont de plus en plus tendance à exercer en équipe pour leur mieux être et celui des patients. . . . Pour se préparer de façon plus adéquate à un tel mode de pratique, il serait souhaitable que cet apprentissage se fasse à l'université; pour des raisons évidentes cependant cette situation se révèle actuellement irréalisable. Il est toutefois possible de donner aux étudiants une certaine préparation en vue de la pratique en groupe grâce à un système d'options dans le trimestre terminal. L'étudiant qui a satisfait aux exigences requises se voit offrir la possibilité d'approfondir ses connaissances dans une discipline donnée. Il pourra, également, s'associer à des confrères qui auront manifesté un intérêt dans d'autres disciplines. Les membres d'une telle équipe, tout en demeurant généralistes, pourront tout au long de leur carrière approfondir un champ d'action particulier et se tenir au courant des plus récentes données grâce à l'autoformation et à l'éducation permanente, au meilleur avantage du groupe et de leur clientèle.

L'administration

Le nouveau mode de pratique du dentiste nécessitera des connaissances administratives beaucoup plus vastes en ce qui a trait entre autres

- a) aux régimes public et privés d'assurance;
- b) à la direction du personnel;
- c) au fonctionnement de l'exercice en équipe;
- d) à l'éthique et à la responsabilité professionnelle.

La sensibilisation à l'action communautaire

En plus des 32 départements de santé communautaires (DSC) actuellement en opération, le réseau comprend 50 centres locaux de santé communautaire (CLSC) auxquels s'ajouteront 22 autres d'ici le 31 mars 1977. . . . Suivant un document qui a émané récemment du MAS³, "Le CLSC est responsable des services de première ligne à l'ensemble de la population de son district. Cette orientation a conduit à l'intégration du préventif et du curatif, de même qu'à l'intégration des services de santé et des services sociaux. Pour assurer adéquatement sa responsabilité, le CLSC doit se doter d'une *équipe multidisciplinaire** capable d'adapter ses programmes préventifs et curatifs aux caractéristiques familiales, socio-économiques et culturelles de la population qu'il dessert".

Il est dit ailleurs dans le même document que le MAS "demandera à certains établissements existants, reconnus pour la qualité de leurs services, *en collaboration avec les Universités** (je sais qu'il s'en parle au Centre hospitalier de l'Université Laval) dans toute la mesure du possible, de mettre en place certains CLSC appelés à contribuer à la formation professionnelle au niveau universitaire".

Il se dessine donc une possibilité de ce côté à laquelle l'on se doit de rester attentif. . . . Même s'il se parle de DSC et de CLSC depuis plusieurs années, la profession dentaire y est peu impliquée et encore moins les étudiants en médecine dentaire. Et il y aurait intérêt à ce qu'ils le soient davantage pour, d'une part, les sensibiliser de plus en plus à l'action communautaire à l'occasion de stages et ainsi les rendre plus familiers avec ces organismes où de plus en plus de dentistes seront appelés à pratiquer dans l'avenir.

L'on ne doit pas cependant jeter la pierre aux planificateurs des programmes ou responsables des départements de dentisterie préventive et communautaire des facultés dentaires, car ces DSC et CLSC n'ont pas pour la plupart une structure et une action complètement définies avec un programme dentaire adéquat. De plus les quelques dentistes qui s'y trouvent n'ont pas dans la majorité des cas la préparation souhaitable pour recevoir nos stagiaires.

Il faut à mon avis garder l'oeil ouvert de ce côté, rester à l'écoute afin d'être prêt à prendre action dès que les circonstances seront propices.

Il n'en demeure pas moins que l'on doit tenter de diverses façons — qu'il n'entre pas dans le cadre de cet exposé de traiter — de sensibiliser nos futurs dentistes à leurs responsabilités sociales car un trop grand nombre d'entre eux ne voient dans l'exercice de la dentisterie que le moyen de gagner leur vie sans se soucier des responsabilités qui incombent à la profession et partant aux individus qui la composent.

*Non souligné dans le texte du MAS

La dentisterie pédiatrique

Le gouvernement se propose d'étendre d'ici trois ans le régime actuel de soins dentaires aux personnes de moins de 19 ans. Or, comme la Direction de la planification du MAS a déjà proposé un programme public pour les enfants et adolescents de 5 à 16 ans basé sur les hygiénistes thérapeutes, il existe une forte présomption que l'on aura recours aux infirmières dentaires pour dispenser la majorité des traitements à cette tranche de la population.

Même si cette hypothèse devait prendre forme, l'enseignement de la dentisterie pédiatrique devrait conserver une place prépondérante dans nos programmes d'étude parce que:

- a) les préscolaires ne sont pas couverts;
- b) le régime public nécessitera la participation de dentistes;
- c) une certaine classe de patients ne se prévaudra pas de cette assurance et continuera à se faire suivre par des dentistes;
- d) des patients présentant des cas complexes seront référés aux dentistes.

Il y aurait peut-être lieu de faire ici un rapprochement avec l'avènement des denturologistes. . . . L'adoption du bill 266 a certes été marquée par un intérêt moins prononcé de la part des étudiants et des jeunes praticiens, entre autres, pour la prothèse complète, mais l'on n'a pas juger bon d'éliminer l'enseignement de cette discipline du programme d'étude pour des raisons qu'il n'est pas nécessaire d'explicitier ici.

En somme, si l'on retient la conception de l'omnipraticien intégral avancée plus haut, il ne saurait être question d'amputer nos curriculums de l'enseignement de disciplines aussi importantes.

La gériatrie

La grande prévalence des affections bucco-dentaires a incité la profession et les facultés dentaires à mettre l'accent à bon droit sur l'éducation et la prévention. Comme il se devait, l'action a été surtout orientée vers les couches les plus jeunes de la société. Il en est résulté que la majorité des personnes du 3e âge ont été à toutes fins pratiques laissées pour compte, surtout celles qui sont logées dans des foyers.

Les interventions qui ont été faites sur la gériatrie en sont restées au stade des vœux pieux. Or la politique gouvernementale nous place dans l'obligation de porter une attention toute particulière aux personnes de 65 ans et plus qui devra se refléter dans nos programmes d'étude. Les étudiants devront être mieux préparés à dispenser des soins à des personnes âgées très souvent atteintes de troubles cardiovasculaires et respiratoires ou d'autres maladies systémiques comme le diabète.

L'enseignement hospitalier

La formation hospitalière des nouveaux diplômés en médecine dentaire est très peu poussée et l'on ne saurait trop en blâmer les facultés dentaires qui sont bien au fait de la place qui est réservée aux dentistes dans les hôpitaux du Québec.

Les autorités du MAS sont conscientes des déficiences en ce domaine. La présence des dentistes s'impose à l'hôpital de façon très concrète et non pas seulement nominale comme c'est le cas dans la presque totalité des hôpitaux. Le Conseil des médecins et *dentistes* ne doit pas demeurer une appellation fantaisiste mais bien traduire une réalité. Tous les grands hôpitaux devraient compter un département dentaire avec au moins un dentiste à temps plein, où il est possible de traiter les patients hospitalisés ou qui doivent l'être pour recevoir des soins adéquats. Des traitements d'urgence devraient aussi être accessibles dans certains hôpitaux.

Le MAS attend des recommandations précises en ce domaine de la part du Comité de la santé dentaire qui ne devrait pas tarder à ce faire. . . . Et ce n'est que lorsque les départements dentaires seront bien structurés dans les hôpitaux, au moins dans certains hôpitaux, que les facultés dentaires pourront collaborer à la formation adéquate des futurs dentistes en ce domaine.

La durée des programmes d'étude

L'on a tendance à ajouter au fil des ans des matières à un programme d'étude et à donner même plus d'importance à celles qui y figurent déjà avec le résultat que les curriculum deviennent touffus et surchargés. En de très rares occasions procède-t-on à un élagage pour en arriver à un réaménagement harmonieux qui réponde adéquatement aux besoins du temps. Cette inclination se manifeste à un point tel qu'il faudrait bientôt mettre sur pied un programme d'étude de cinq ans car il est anachronique d'imposer aux étudiants des semaines d'au-delà de 30 et même 35 heures — présence à l'université, sans compter que cette façon d'agir élimine presque totalement la possibilité d'autoformation que l'on demande à l'étudiant et que l'on continuera d'exiger de lui lorsqu'il aura gradué.

La prolongation de la durée du cours en rendrait le coût encore plus élevé et irait de la sorte à l'encontre de la politique gouvernementale. Une telle orientation provoquerait un recours encore plus accéléré aux auxiliaires dans un but d'économie.

Il ressort de ces quelques considérations que la ligne d'action semble toute tracée.

Conclusion

Cette vue à vol d'oiseau de la politique gouvernementale et de ses répercussions sur les programmes d'étude dentaires ne permettait certes pas de traiter en profondeur d'une aussi vaste question. Tout au plus visait-elle à apporter quelques éléments de réflexion en cette période qui restera marquante dans l'histoire de la médecine dentaire au Québec.

Dr. Paul Simard est le directeur de l'Ecole de médecine dentaire de l'Université Laval.

- 1 Simard, P., Lussier, J.-P., Les soins dentaires au Québec, Journal de l'A.D.C., vol. 36, no. 12, 1970.
- 2 Simard, P., Ouvrons-nous les yeux, Journal dentaire du Québec, vol. 11, no. 6, 1965.
- 3 Perspectives à l'égard des CLSC (76-E-362), 1976.

STATUS REPORT: HIGH COPPER AMALGAMS

Approximately 75 per cent of restorations placed in individual teeth are of amalgam. Its wide acceptance is due to the many developments and improvements that have taken place over the last hundred years and have given us the high quality materials we have today.

Initially, particle sizes of the alloys were quite coarse but with improved manufacturing methods smaller and smaller particle sizes were developed. In the 1960's, spherical alloy particles became available with further improvements in physical and handling characteristics. Very little change in chemical composition took place over this period of time, the approximate formula proposed by G. V. Black in 1896 being maintained.

Amalgam is characterized by its ease of placement in the prepared cavity, its carvability, its resistance to masticatory forces when fully hardened, its reasonably close adaptation to the walls of the cavity, its unique property to prevent the ingress of oral fluids at the amalgam-tooth interface, its relative inertness to the oral environment, and its low cost. However, amalgam still has numerous weaknesses which all clinicians observe. Among these are low early strength, corrosion in some mouths and marginal breakdown.

The setting reaction of dental amalgam is a relatively slow one. Amalgam does not attain sufficient strength to withstand occlusal forces for several hours after placement. For this reason, practitioners should caution their patients against stressing the restoration for the first eight hours. It is believed that most gross fractures occur during this critical time interval.¹

In the amalgam reaction, several phases are present. The set amalgam consists of particles of unreacted alloy surrounded by a matrix of silver-mercury and tin-mercury compounds. These last two are commonly referred to as the gamma-1 (γ_1) and the gamma-2 (γ_2) phases. The amalgam phase most prone to corrosion is the γ_2 phase. The corrosion products found at the surface and the interface of old restorations have been identified as tin oxides, sulfides and chlorides.² The source of the tin is the breakdown of the γ_2 phase. The clinical manifestations of corrosion are the discoloration of the restoration and the weakening of the metallic structure, rendering the margins more susceptible to fracture.

Marginal breakdown is a very complex phenomenon not yet fully understood. Among the reasons most often cited

are: high mercury content, incorrect carving, delayed expansion, faulty cavity design, low ductility and tensile strength etc. Studies have shown that marginal breakdown can be predicted by measuring the dynamic creep of the amalgam.³⁻⁴

The first attempts to improve on these weaknesses were made by Canadians. In 1963, Youdelis and Innes⁵ described an amalgam alloy containing silver-copper eutectic particles. It was claimed that this material had improved physical properties. This formula led to the commercial product known as Dispersalloy (Johnson & Johnson Dental Products, Montreal). Restorations made from this alloy are more resistant to corrosion due to the absence of γ_2 formation. Recent research has shown that elimination or reduction of γ_2 can be achieved by different means such as the addition of gold,⁶ manganese⁷ or copper⁸ to the alloy. In the last year, several new alloys containing greater amounts of copper have become available. Claims are being made for superior and improved compressive strengths, lower static creeps, and elimination or reduction of the γ_2 phase in the finished product. Some of these products are: Aristaloy CR (Baker Dental Products, Carteret, N.J., USA); Phasealloy (Phasealloy Inc., El Cajon, Calif.); Indiloy (Shofu Dental Corp., Menlo Park, Calif.); Micro II (L. D. Caulk Company, Toronto); Optaloy II (L. D. Caulk Company, Toronto); Sybraloy (Kerr Canada Limited, Toronto); and Tytin (S. S. White, Etobicoke, Ont.). This list is not necessarily complete but it does contain most of the new alloys presently being introduced to the dental practitioner. A brief discussion of each alloy follows:

Dispersalloy — Conventional alloy admixed with silver-copper eutectic spheres. Available in disposable capsules, pellets or powder. Recommended mercury-alloy ratio is 1:1. Gives smooth plastic mass on trituration. Condenses with some resistance. Fairly slow setting. Early strength: high; may be able to support masticatory forces after one hour. Corrosion: several years of successful clinical use with negligible corrosion. Creep: 0.25 per cent. Excellent resistance to marginal breakdown as shown by several clinical evaluations.^{3,4,8}

Aristaloy CR — Ternary alloy of silver-tin-copper. Particle shape: variable. Available in disposable capsules and pel-

lets. Recommended mercury-alloy ratio is 1:1. Gives smooth cohesive plastic mass and appears wet on trituration. Condenses with more resistance than spherical but less than microcut. Fairly rapid setting. Early strength: high; may be able to support masticatory forces after one hour. Corrosion: testing found this alloy to be γ_2 free. Creep: 0.3 per cent. Nine-month clinical studies have shown promising results; however, two-year data are required for full evaluation.

Phasealloy — Two-third microcut conventional alloy admixed with one-third silver-copper spheres. The spheres have a copper content of 51 per cent, and are available in pellet and powder form. A mercury alloy ratio of 1:1 gives a soft, smooth, plastic mass that condenses like a microcut alloy. Slow setting, though a fast setting product is available and an extra-fast set on special request. Manufacturer claims high early strength as is typical of high copper amalgams and also suggests initial clinical evaluations give results comparable to Dispersalloy.

Indiloy — Quaternary alloy of silver-tin-copper-indium. Spheroidal particles. Available in both disposable capsules and pellet form. Recommended mercury-alloy ratio 0.84:1. Gives smooth plastic mass on trituration. Condenses with more resistance than spherical. Fairly rapid setting. Early strength: high; may be able to support masticatory forces after one hour. Corrosion: testing found this alloy to be γ_2 free and presence of indium is claimed to render the silver, tin and copper chemically passive and hence highly resistant to corrosion. Creep: 0.1 per cent.

Micro II — Microcut conventional alloy admixed with silver-copper spheres. Available in pellet form. Recommended mercury-alloy ratio 1.17:1 (54 per cent Hg). Gives smooth plastic mass on trituration. Condenses similarly to microcut alloys. Slow setting. Early strength: comparable to conventional spherical alloy. Corrosion: γ_2 free. Creep: 1.5 per cent.

Optaloy II — Microcut conventional alloy admixed with silver-copper spheres. Available in disposable capsules containing 54 per cent Hg. Not as smooth as Micro II. Condenses similarly to conventional microcut alloys; mercury must be expressed from the mix. Fast setting. Early strength: same as Micro II. Corrosion: γ_2 free. Creep: 1.6 per cent.

Sybraloy — Ternary alloy of silver-tin-copper. Particle shape is spherical. Available in disposable capsules containing 45 per cent Hg. After mixing does not appear to be fully amalgamated and is not characteristic of other alloys; however it remains plastic on trituration. Condensation requires firmer packing pressure than conventional spherical alloys but less than conventional microcut alloys. Fastest setting among the alloys under consideration. Early strength: very high; may be able to support masticatory forces after approximately 20 minutes. Corrosion: γ_2 free. Creep: 0.03 per cent.

Tytin — Ternary alloy of silver-tin-copper. Metallurgically identical to Aristaloy CR. Particle shape is porous spherical. Available in disposable capsules of 43.5 per cent Hg. Extremely short trituration time and gives smooth plastic mass. Condenses similarly to conventional spherical alloys. Excellent carvability. Fairly rapid setting. Early strength: high, may be able to support masticatory forces in less than one hour. Corrosion: γ_2 free. Creep: 0.07 per cent.*

All of these high-copper alloys exhibit superior physical properties to conventional alloys. Their clinical performance is still not fully known because of their very recent appearance on the market. Only Dispersalloy has been available for many years and has proven itself worthy of being classified as a superior amalgam alloy.

Many clinical studies have shown Dispersalloy to resist marginal fracture. Since most of the materials discussed have creep values which are approximately equal to or much lower than that of Dispersalloy, it can be anticipated that excellent marginal integrity can be expected with these materials. Only Micro II and Optaloy II have demonstrated higher creep values and so should probably not perform as well as the others. However, they are superior to conventional alloys.

Fairly good resistance to corrosion has been demonstrated in laboratory studies involving these high-copper alloys. However, the best laboratory for testing corrosion resistance is still the oral environment. Dispersalloy has proven itself in this regard. It should be mentioned that the indium-containing Indiloy may prove to be a breakthrough if indeed the indium can render chemically passive the other elements and yield an inert amalgam restoration as claimed by the manufacturer. Only time will tell.

Generally, all these materials exhibit higher early strength and hence greater resistance to bulk fracture can be anticipated.

Selecting a particular material implies consideration of several factors other than those mentioned above. Particular requirements of the individual practitioner should also be considered, such as the speed of the operator, the size, shape and location of a particular cavity, the ability of the operator to handle the various shapes of particles, and the carvability and feel of the material in the operator's hands.

Irrespective of which material the operator selects, meticulous attention to detail is a prerequisite to the success of the amalgam restoration. Proper manipulation of the materials, correct cavity preparation, dry field technique, proper occlusal adjustments and final polish cannot be circumvented. These new materials are opening up a new and exciting era in the development of the high quality amalgam restoration.

* Most of the physical property data listed were taken from J. F. Macnamara & W. B. Eames, IADR presentation No. 887 at Miami Beach, Vol. 55, 1976.

The Council is grateful for the preparation of this report by Dr. P. C. Desautels, an associate professor of dental materials, Université de Montréal, Faculté de médecine dentaire, C.P. 6209, Succursale A, Montréal, H3C 3T9; and Dr. R. Y. Barolet, an associate professor of dental materials, Université Laval, Ecole de médecine dentaire, Québec, G1K 7P4.

- 1 Skinner, W. E. and Phillips, R. W. The science of dental materials, Ed. 6. Philadelphia, Sunders, 1967.
- 2 Sarkar, N. K., Marshall, G. W., Moser, J. B. et al. *In vivo* and *in vitro* corrosion products of dental amalgam. J Dent Res 54:1031, 1975.
- 3 Binon, P., Phillips, R. W., Swartz, M. L. et al. The clinical behavior of amalgam as related to certain mechanical properties. J Dent Res 52: Abstract 509, Feb. 1973.
- 4 Mahler, D. B., Terkla, L. G. and Van Eysden, J. Marginal fracture of amalgam restorations. J Dent Res 52:823, 1973.
- 5 Youdelis, W. V. and Innes, D. B. K. Dispersion strengthened amalgams. J Canad Dent Ass 29:587, 1963.
- 6 Johnson, L. B. Jr. A new dental alloy. J Dent Res 50: Abstract 23, Feb 1971.
- 7 Waterstrat, R. M., Rupp, N. W. and Manuszewski, R. C. Improved creep behavior and removal of gamma-2 phase in dental amalgams containing manganese. J Dent Res 55: Abstract 883, Feb 1976.
- 8 Dupéron, D. F., Neville, M. D. and Kasloff, Z. Clinical evaluation of corrosion resistance of conventional alloy, spherical particle alloy and dispersion phase alloy. J Prost Dent 25:650, 1971.



We're moving to increase efficiency. Ours and yours.



New and better facilities mean increased efficiency. That's why we've been continuing to provide them for both customers and employees across the country. In the past few years we have moved to better facilities in St. John, Montreal, London, Regina, Calgary and Edmonton. We have refur-

nished our offices in Halifax and Winnipeg; increased our space in Ottawa and Vancouver; opened a new office in Quebec City. Now, it's Toronto's turn. To increase our efficiency throughout all of Canada, we are moving our Toronto Office facilities. Inventory control, handling, speed and reliability will all benefit. Most of all — so will you. Ash Temple has been over 70 years at 243 College Street. We have had lots of time to plan the move and we believe

we've done it well. At our new address we're highly accessible: 31 Scarsdale Rd., Don Mills, is close to highway and railway. Oh, we won't be perfect. Because Ash Temple has always been a human resource first. But with our new facilities we will try to be as close to perfect as possible. In the months ahead we'll keep you up to date as our improvements in efficiency take place.

Ash Temple
LIMITED

Report of a case:

AN AGGRESSIVE CENTRAL GIANT CELL GRANULOMA OF THE MAXILLA

Ian D. F. Schofield, BA, DDS, FRCD(C)
H. Holmes, DDS
London, Ont.

A central giant cell granuloma of the maxilla is presented which had reached a large size in an 11-year-old boy. Conservative management resulted in its recurrence, requiring subsequent excision and an immediate autogenous bone graft.

An 11-year-old Caucasian male was referred to the oral surgery service of the University Hospital, with a chief complaint of swelling in the anterior maxilla. This well-nourished, well-developed child presented with a non-contributory medical history.

The enlargement in the anterior maxilla had gradually increased in size over the last three months. The child's parents stated that he had been thrown over the handlebars of his bicycle and struck his face about that time. On examination, the oral mucosa and dentition were normal except for an unerupted maxillary cuspid; the maxillary anterior teeth were protrusive and spaced, slightly mobile and tender on mastication. The swelling was firm, non-tender, non-compressible, non-fluctuant and non-pulsating. The lesion had obliterated the right and left nasolabial fold, the palatal vault posterior to the first molars and the buccal sulcus to the area of the bicuspid (Fig 1). There were no palpable nodes.

The radiographic survey revealed a trabeculated radiolucency in the anterior maxilla (Figs 2, 3). The area was consistent with the clinical findings.

In September 1973, aspiration and incisional biopsies were done under local anaesthesia. The incisional biopsy in the canine fossa revealed lack of cortical bone on the left side and eggshell-like cortical bone on the right side. Brisk haemorrhage appeared at the incision sites, which was controlled by local pressure and absorbable sutures. The tissue removed was soft, reddish, pliable, and haemorrhagic in nature; it was submitted for histological interpretation and the pathologic report was central giant cell granuloma. The patient was hospitalized for further investigations. On admission, physical, medical and laboratory examinations, including serum calcium, phosphorous and alkaline phosphatase, were within normal limits. The patient was

cross-matched for one unit of whole blood and one unit of packed red blood cells. Under endotracheal anaesthesia, through a large buccal envelope flap, the tumour was removed by curettage. After an uneventful recovery, the child was discharged, to be seen on regular recall appointments as a dental out-patient.

Three and one half months later the tumour had regrown to its original size and the patient was re-admitted. Under endotracheal anaesthesia, the head and hip were draped for surgery. Envelope flaps were raised buccally and palately to the area of the second molars, with vertical incisions in the buccal flap. An osteotome was used to transect the maxilla distal to the first bicuspid and under the nasal spine. The tumour was enucleated and did not appear to have invaded the antral space. Haemostasis was controlled by epinephrine-impregnated gauze with pressure until small residual areas of tumour could be identified, curetted and cauterized. The area was carefully inspected and packed with gelfoam soaked in thrombin to control haemostasis until the defect was filled. The autogenous iliac crest bone graft was taken in the usual manner. The maxillary defect was packed with marrow and cortical bone chips while the cortical plate was scarred to form the anterior maxilla. The area was overfilled and the soft tissue was trimmed for primary closure with mattress sutures of 4-0 Dexon. The patient tolerated the procedure well; he lost approximately 700 cc of whole blood which was replaced with one unit of whole blood and one unit of packed cells, together with the intravenous fluid (5 per cent DW with 0.2 NaCl). The post-operative period was uneventful. The pathological report was central giant cell granuloma (Figs 4,5).

The patient has been seen for regular recall visits and radiographs (Fig 6). After sloughing some small pieces of the graft through his alveolar ridge, it healed well enough to support a dental prosthesis. Some 14 months after this operation, a purplish discoloration appeared in the midline of the maxilla. This area was removed *in toto* as an excisional biopsy; the pathology report was giant cell granuloma. The patient was followed up regularly for recall examination, and now has been free of the tumour for almost four years.



Fig 1 Models constructed from impressions taken on initial examination to show extent of lesion on buccal and palatal aspects.

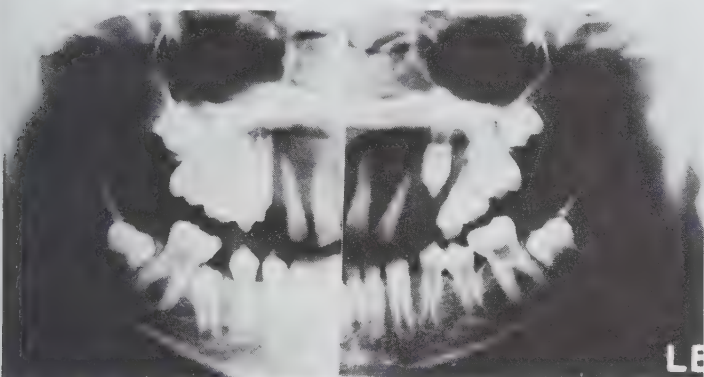


Fig 2 Original panorex showing radiolucent lesion in anterior maxilla, showing drifting and spacing of erupted teeth and non-erupted cuspid.

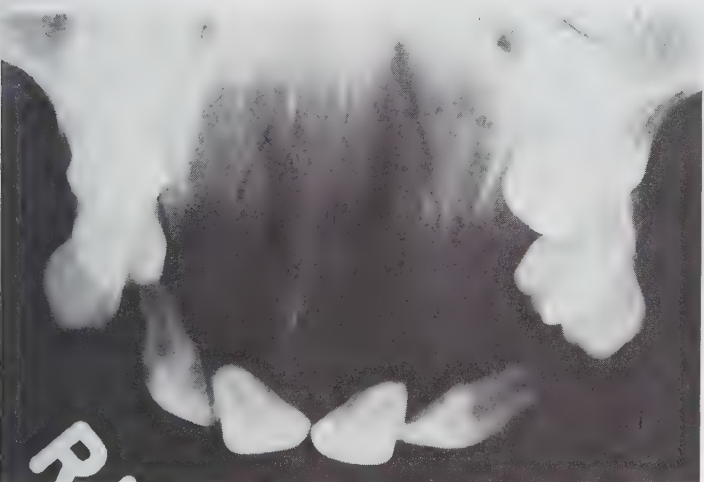


Fig 3 Occlusal radiograph showing extent of radiolucent lesion in the palatal aspect.

Fig 4 Histology of specimen, all biopsies were similar. Low power.

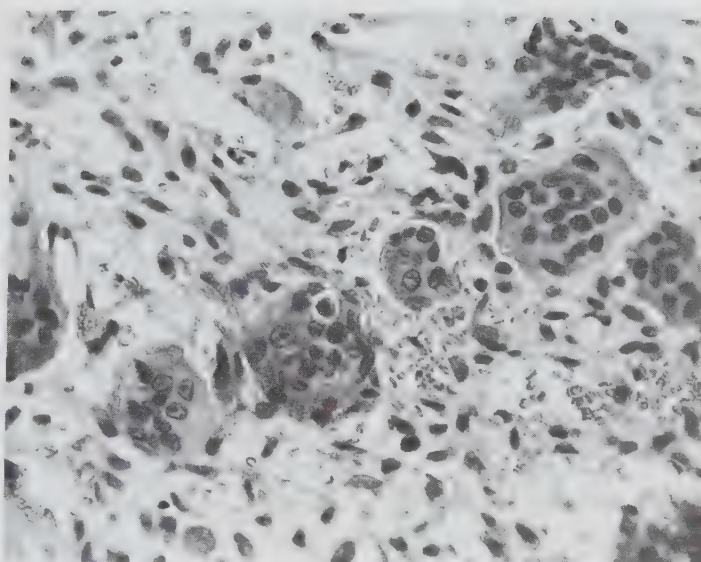
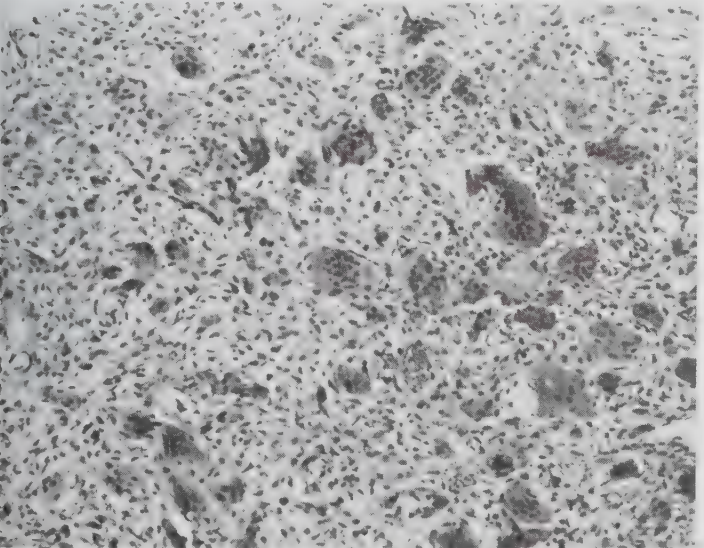


Fig 5 High power of Fig 4 illustrating multinucleated giant cells.



Fig 6 Panorex one year later showing residual defect.

Pathology

All pathology specimens taken were reported as central giant cell granuloma. The lesions presented a loose vascular connective stroma among numerous multinucleated giant cells (Fig 4). The giant cells varied in size and contained many nuclei (Fig 5). Small foci of haemorrhage and areas of haemosiderin pigmentation were noted in the more fibrous portions of the specimen (Fig 5). The pathology report stated that "occasional normal mitotic figures are noted in the fibrous stromal portion of the tissue specimen."

Discussion

In 1940, the central giant cell tumour of bone was described by Jaffe, Lichtenstein and Portis.¹ This tumour occurs in the ends of the long bones in the age group 20 to 40 years, with women more commonly affected than men. The incidence is difficult to assess because the true nature of the lesion was not known until Jaffe's paper appeared. In 1953, Waldron² and Jaffe^{3,4} reviewed the giant cell lesions. Both believed the central giant cell tumour was a true neoplasm in the long bones but in the jaws suggested it be called a giant cell granuloma.

Waldron and Shafer,⁵ in their review of giant cell lesions, point out the general state of confusion that exists in the

classification, particularly between the central giant cell granuloma and the giant cell tumour. In past years any lesion with giant cells would have been labelled a giant cell tumour.

Other disease entities such as hyperparathyroidism, fibrous dysplasia and aneurysmal bone cysts also produce giant cell lesions and are very similar histologically. When all are categorized, there still remains a group which are very aggressive; this is the group usually labelled as giant cell tumour.

Several investigators have reviewed giant cell lesions of the jaws: Hutter et al⁶ (76 cases); Mnaymneh, Dudley and Mnaymneh⁷ (41 cases); Dahlin, Capps and Johnson⁸ (195 cases); Goldenberg, Campbell and Boafiglio⁹ (218 cases); McGrath¹⁰ (52 cases); and Schajowicz and Slullitel.¹¹ Many investigators agree with Jaffe and designate these lesions as central giant cell granulomas. On the other hand, Bhaskar, Bernier and Godby¹² have stated that a true central giant cell granuloma of the jaw has never been reported.

In the present case the tumour was found in an 11-year-old child, and this agrees with Waldron and Shafer's study. It was in the minority, statistically, being in a male and located in the maxillae. However, it was consistent with other clinical findings in that it involved the tooth-bearing areas, crossed the midline, was generally symptomless, and caused bulging of the cortical plate and movement of the standing dentition (Fig 1) which were vital. Also, there was a history of trauma to the area, which is frequently a factor in giant cell lesions.

The radiographic appearance is not diagnostic and presents as a destructive radiolucent area (Fig 3) which was trabeculated, had distinct and indistinct borders, showing expanded cortical plate, and drifting of dentition. This picture is common to many destructive osseous lesions. Our laboratory examination, history, exploratory aspiration and biopsy, resulted in the diagnosis of central giant cell granuloma.

The treatment of giant cell lesions is primarily conservative; enucleation or curettage is the choice, with perhaps some obliteration of the defect. Endodontic treatment has been used to conserve some standing teeth.¹³ Jaffe,¹⁴ Waldron,² Hutter,⁶ Shafer,¹⁵ and Gorlin and Goldman¹⁶ recommend conservative treatment. Waldron and Shafer,⁵ in their review of giant cell lesions in 1966, said that "none of our cases became aggressive." On the other hand, we find a more aggressive management applied by Guralnick and Donoff,¹⁷ Kennett and Cohen,¹⁸ and Pedersen.¹³ In our case, we started with a conservative approach but had to resort to a more complete enucleation as a second procedure. Perhaps initial curettage to try to preserve the standing dentition left many small areas of tumour which eventually recurred. The small recurrence in the anterior palate area may again have been the result of an incomplete removal of the tumour from the palatal flap during the second operation. The final treatment plan of immediate placement by an autogenous iliac crest bone graft was based on the advantages of immediate space obliteration, acceleration of

osteogenesis, and immediate reconstruction of the defect. This allowed early rehabilitation with a maxillary dental prosthesis.

Numerous cases have been reported in the literature of recurrent central giant cell granuloma, but Hayward¹⁹ is the only one to report metastasis. Goldenberg et al⁹ quote a 68 per cent success rate when treated by resection, and Hutter et al⁶ state a 62 per cent recurrence rate when treated by any other means. A high recurrence follows local curettage, and surgical excision is considered to be the treatment of choice. The central giant cell granuloma is not radio-sensitive, and this therapy may lead to malignant changes.⁸⁻²⁰

Dr. Schofield is assistant professor, Division of Oral Surgery, Faculty of Dentistry, University of Western Ontario, London, Ontario.

Dr. Holmes is a dental intern, University Hospital, London, Ontario.

- 1 Jaffe, H. L., Lichtenstein, L. and Portis, R. B. Giant cell tumor of bone. *Arch Path* 30:993, 1940.
- 2 Waldron, G. A. Giant cell tumors of the jaw bones. *Oral Surg* 6:1055, 1953.
- 3 Jaffe, H. L. Giant cell reparative granuloma, traumatic bone cyst, and fibrous (fibro-osseous) dysplasia of the jawbones. *Oral Surg* 6:159, 1953.
- 4 Idem. Giant cell tumour (osteoclastoma) of bone: its pathological delimitation and the inherent clinical applications. *Ann Roy Coll Surg (Eng)* 13:343, 1953.
- 5 Waldron, C. A. and Shafer, W. C. Central giant cell reparative granuloma of the jaws. *Amer J Clin Path* 45:437, 1966.
- 6 Hutter, R. V. P., Worcester, J. N. Jr., Francis, K. C. et al. Benign and malignant giant cell tumors of bone. *Cancer* 15:653, 1962.
- 7 Mnaymneh, W. A., Dudley, H. R. and Mnaymneh, L. G. Giant cell tumor of bone. An analysis and follow-up study of forty-one cases observed at the Massachusetts General Hospital between 1925 and 1961. *J Bone Joint Surg* 46:63, 1962.
- 8 Dahlin, D. C., Capps, R. E. and Johnson, E. W. Giant cell tumor, a study of 195 cases. *Cancer* 25:1061, 1970.
- 9 Goldenberg, R. R., Campbell, C. J. and Boafiglio, M. Giant cell tumour of bone. *J Bone Joint Surg* 52A:619, 1970.
- 10 McGrath, P. J. Giant cell tumour of bone: an analysis of 52 cases. *J Bone Joint Surg* 54:216, 1972.
- 11 Schajowicz, F. and Slullitel, I. Giant cell tumor associated with Paget's Disease of bone. *J Bone Joint Surg* 48A:1340, 1966.
- 12 Bhaskar, S. N., Bernier, J. L. and Godby, F. Aneurysmal bone cyst and other giant cell lesions of the jaws: Report of 104 cases. *J Oral Surg* 17:30, 1959.
- 13 Pedersen, G. W. Central giant cell lesions of the mandibular enucleation and immediate reconstruction. *J Oral Surg* 36:790, 1973.
- 14 Jaffe, H. L. Tumors and tumorous conditions of the bones and joints, Philadelphia. Lea & Febiger, 1958.
- 15 Shafer, W. G., Hine, M. K. and Levy, B. M. A textbook of oral pathology. Ed 2. Philadelphia. Saunders, 1963.
- 16 Gorlin, J. and Goldman, H. M. Thoma's oral pathology. Ed 6. St. Louis. Mosby, 1970.
- 17 Guralnick, W. C. and Donoff, R. B. Central giant cell granuloma. Several interesting cases. *Brit J Oral Surg* 9:200, 1972.
- 18 Kennett, S. and Cohen, H. Central giant cell tumor of the mandible: report of a case. *J Oral Surg* 29:492, 1971.
- 19 Hayward, J. B. Malignant giant cell tumor of the mandible. *J Oral Surg* 17:75, 1959.
- 20 Johnson, E. W. and Dahlin, D. C. Treatment of giant cell tumor of bone. *J Bone Joint Surg* 41A: 895, 1959.

EFFICACY



ECONOMY

ISOCAINE

brand of

MEPIVACAINE HCl

ISOCAINE
(mepivacaine) HCl

Isocaine HCl 3%
Isocaine HCl 2%
with levonordefrin
1:20,000

Isocaine HCl brand of mepivacaine HCl gives you a choice of two different concentrations to meet the specific anesthetic requirements of varying dental procedures and patient needs. With either formulation, Isocaine assures fast onset, deep anesthesia and dependable efficacy. Economically priced to the profession, Novocol's brand of mepivacaine is available through select dental dealers.

Isocaine HCl 3% may be used with confidence for procedures of short to average duration and when vasoconstriction is contraindicated. For longer procedures and those requiring a vasoconstrictor, Isocaine HCl 2% with levonordefrin 1:20,000 is suggested. Complete product information is packaged with each formulation. Efficacy and economy are yours in dependable dental anesthetics when you specify Isocaine brand of mepivacaine.



NOVOCOL

Chemical Mfg. Co.
Of Canada, Ltd.
2 Chauncey Ave.
Toronto M8Z 2Z4, Ontario

ANKYLOSIS WITH AND WITHOUT OLIGODONTIA: REPORT OF SEVEN CASES

A. Ruprecht, DDS, MScD, FRCD(C)
Saskatoon

G. Z. Wright, DDS, MSD, FRCD(C)
London, Ont.

Seven patients with ankylosed teeth have been presented. A review of the current theories does not provide one that properly explains all cases. Biederman's theory seems to provide the most promising direction in which to proceed for investigation, but does not yet conclusively provide the answer to the search for a cause for ankylosis. Further research is required in order to provide clinicians with a good basis for treatment or prevention of this condition.

One of the factors that affects occlusal development is ankylosis of primary teeth. An ankylosed tooth can prevent eruption or deflect succedaneous teeth. Recent reports indicate that between 3.2 per cent¹ and 6.9 per cent² of developing dentitions are affected. Thus, the problem of ankylosed primary teeth is not rare and deserves the attention of the dental profession.

Ankylosis results from union between mineralized tissue (cementum and/or dentine) and alveolar bone.³⁻⁵ Since the union impedes the occlusal migration of the involved tooth, the phenomenon presents the clinical picture of an apparently submerged tooth,⁶ and in the past resulted in the misnomer "submerged molar".

Whereas there seems to be general agreement about the nature of ankylosis, its etiology is less well understood.² The purpose of this paper is to present six clinical cases of single or multiple ankylosed teeth in conjunction with oligodontia, and one case with succedaneous teeth. These cases will be discussed in view of current theories.

Ankylosed teeth present most commonly in the primary dentition.² The first clue which usually leads the clinician to suspect ankylosis, is the apical position of a tooth relative to the occlusal plane. Percussion of the tooth, if ankylosed, frequently yields a "hollow" or "dull" sound as compared to non-ankylosed teeth. An ankylosed tooth also lacks mobility, even when minimal root structure is still present.¹

Radiographically, there is often lack of a well-pronounced periodontal ligament space and lamina dura. The lack of this feature does not rule out ankylosis because it could occur on either the buccal or lingual surface of an involved tooth and not manifest radiographically. The affected tooth is seen to be below the line of occlusion and on

serial radiographs may appear to be moving apically, relative to the surrounding teeth. Once this difference in occlusal height becomes pronounced, contacting teeth may tip over the ankylosed tooth and give the appearance of pushing the ankylosed tooth into the alveolar process.

Ankylosis may occur in the presence or absence of successor teeth. An interesting phenomenon reported by Thornton, et al.,⁵ was that primary teeth without succedaneous teeth most often had areas of ankylosis in the apical area, whereas those with successors have a wider dispersion of these areas histologically. This may be due to a wider area of resorption when succedaneous teeth are present.

Case reports

Case 1 — D.J.F., a male, presented at age 8 years, 10 months; at which time several permanent teeth (14, 24, 34, 35, 43, 44, 45) were found to be developmentally absent. The periodontal ligament space was not well defined about 75, 84 and 85 (Fig 1). As this patient was followed up radiographically, the periodontal ligament space became even less pronounced and 75, 84 and 85 could be seen to be "moving to a position below the occlusal level". The diagnosis was multiple ankylosed teeth in conjunction with oligodontia.

Case 2 — K.S., a female aged 9 years, 11 months, presented with radiographic evidence of non-development of multiple permanent teeth (12, 14, 15, 22, 23, 24, 25, 31, 32, 34, 35, 41, 42, 44, 45). There was no evidence of the periodontal ligament space about 54, 64, 74, 75, 84 and 85 (Fig 2). These primary teeth were apical to the level of occlusion, and the radiographic appearance was consistent with a diagnosis of multiple ankylosed teeth with oligodontia.

Case 3 — K.W., a 10 year old female, was found to have multiple developmentally missing permanent teeth (13, 14, 15, 17, 23, 24, 25, 27, 33, 34, 35, 37, 43, 44, 45, 47). With the exception of 65, all primary molars were apical to the occlusal plane and had missing periodontal ligament spaces. Both mandibular permanent molars were tipped



Fig 1a



Fig 1b

Fig 1 (Case 1). (a) A pantomograph of D.J.F. reveals the absence of all four first premolars and both mandibular second premolars. (b and c) Follow-up radiographs taken three and four years later, confirm this absence. Appearance of the mandibular deciduous second molars and right first molar is consistent with ankylosis.

Fig 2 (Case 2). K.S. is missing all permanent lateral incisors, first and second premolars, the mandibular central incisors and the maxillary left canine. All four deciduous first molars and both mandibular deciduous second molars show evidence of ankylosis.

Fig 3 (Case 3). The radiograph of K.W. shows evidence of ankylosis of all deciduous molars except for the maxillary left second molar, with absence of multiple permanent teeth including all successors to the above molars.

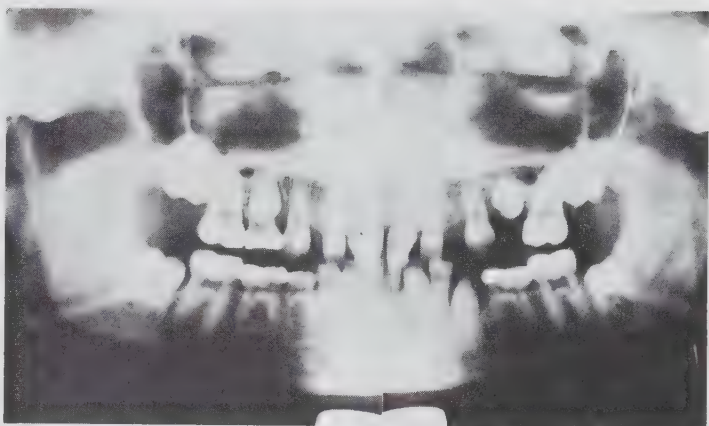


Fig 1c

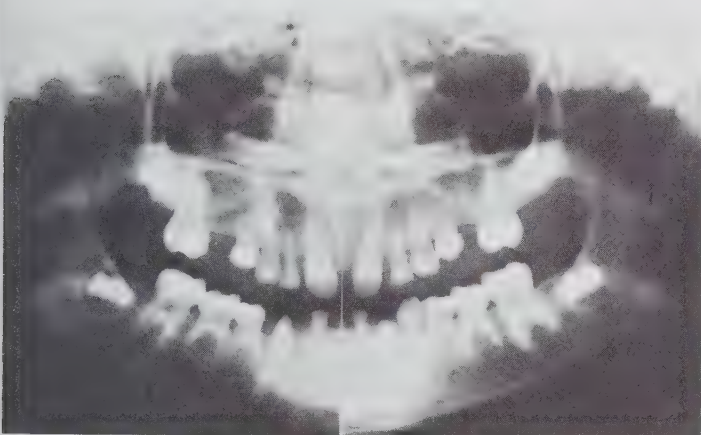


Fig 2

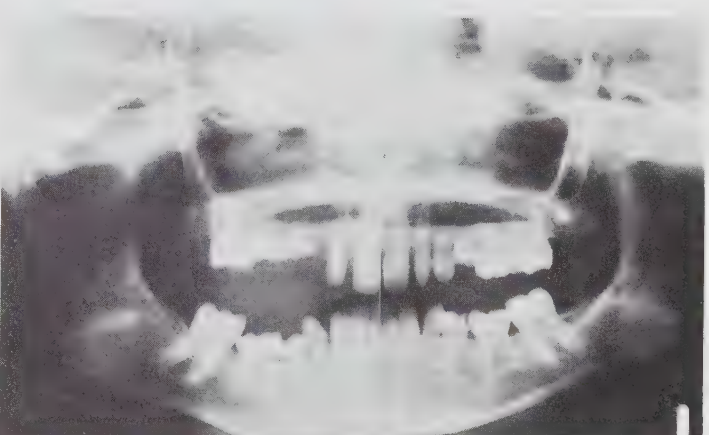


Fig 3

mesially over the occlusal aspects of the second primary molars mesial to them (Fig 3). Again, the diagnosis was multiple ankylosed teeth with oligodontia.

Case 4 — E.P., a 22 year old male, was, upon routine examination, found to have a retained primary mandibular right second molar below the line of occlusion. Both neighbouring teeth were tipped over its occlusal surface. Radiographically, there was no evidence of a succeeding tooth. No periodontal ligament space could be seen on the radiograph. On the contralateral side, the second premolar was developmentally absent. The diagnosis was an ankylosed tooth with oligodontia (Fig 4).

Case 5 — R.M., a 16 year old male, presented for investigation of old fractures of the condyles. Upon examination, a retained primary right maxillary second molar was found. The permanent first molar and cuspid were tipped over the occlusal surfaces of the primary tooth. No permanent second premolars had erupted in the other quadrants. Radiographically, the periodontal ligament space about the retained molar was missing on the mesial (Fig 5). There was no evidence of any second premolars or the maxillary left lateral incisor. The diagnosis was an ankylosed tooth with oligodontia.

Case 6 — B.C., an 18 year old female, was seen for investigation of teeth below the line of occlusion. Clinically,

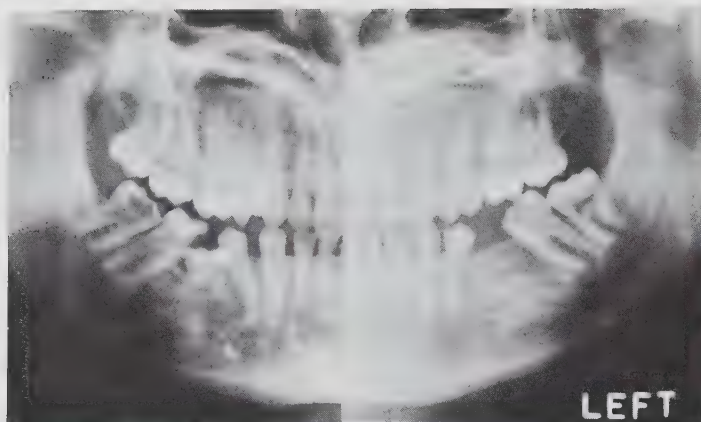


Fig 4 (Case 4). E.P. presented with an ankylosed mandibular right second molar without a succedaneous tooth.



Fig 5 (Case 5). On investigation of joint fractures, R.M. was found to have an ankylosed maxillary right deciduous molar. Several permanent teeth, including the maxillary right premolars, were absent.



Fig 6 (Case 6). B.C. presented with developmentally absent mandibular second premolars. Both left deciduous molars were ankylosed.

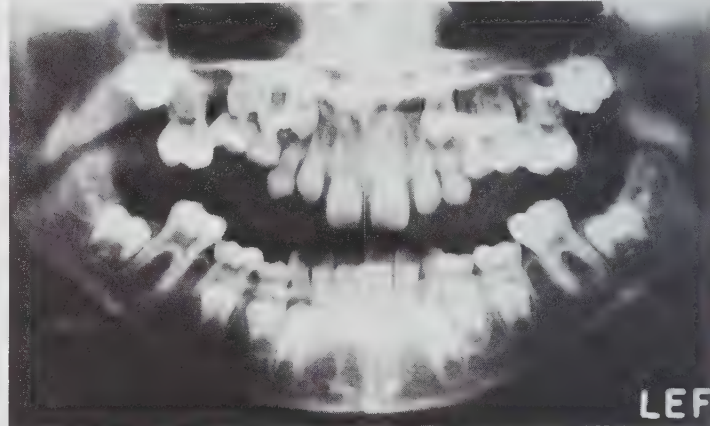


Fig 7 (Case 7). K.D.P. presented with eight ankylosed deciduous molars in the presence of all eight succedaneous teeth.

both left deciduous primary molars were apical to the level of occlusion. Contiguous teeth appeared to be tipping over the occlusal surfaces. The maxillary molar had a succedaneous tooth — the mandibular molar did not (Fig 6).

Case 7 — K.D.P., an 8 year, 10 month male, was referred for investigation of ankylosed teeth. Clinically, all eight primary molars were apical to the level of occlusion. All four permanent molars had tipped mesially over the occlusal surfaces of the second primary molars. Radiographically, periodontal ligament spaces were not well demonstrated (Fig 7). All eight premolars were developing normally. The diagnosis was ankylosis of all primary molars in the presence of succedaneous teeth.

Discussion

Although ankylosis may occur anywhere in the jaw and at any time, Biederman⁴ found in his investigations that there was a recognizable pattern:

1. Nearly all ankylosed teeth are molars (primary and permanent).
2. Most ankyloses take place at a primary or mixed dentition stage.
3. Primary teeth are more commonly involved than permanent teeth in a ratio of better than 2:1.

These findings were basically consistent with the cases reported.

Although there is general agreement about the diagnostic features of ankylosis⁷ there are several theories of etiology.

Trauma has been considered the stimulating factor.⁸ However, attempts have failed to produce this effect in a controlled experiment.^{8,9} Biederman³ in his evaluation, also felt that trauma could be ruled out as a primary cause. In the cases presented, no history of overt trauma could be elicited. Via¹⁰ felt that due to the statistical difference in occurrence rated between siblings and non-siblings, inheritance may play a role.

MacDonald¹¹ stated that ankylosis often follows physiologic resorption of a deciduous tooth due to the eruptive force of a succedaneous tooth. He thought that resorption of a primary tooth is a discontinuous or intermittent process, and that repair or ossification takes place non-committantly. If ossification proceeds too exuberantly, it was suggested that the bone may become continuous with the tooth being resorbed, and as a consequence, lead to ankylosis of the primary tooth.

It is difficult to accept this theory entirely in view of seven of the cases presented. There were 18 ankylosed teeth with-

out successors. It appears that the eruptive force of a succedaneous tooth is not a prerequisite for resorption.

Biederman's investigations on location of multiple ankylosis indicate statistically that local metabolic factors may be the cause. He believed that ankylosis might be due to a disturbance in the metabolic factors that lead to the re-absorption of Sharpey's fibres on the alveolar bone end and the disposition of these fibres at the other dental end, thus maintaining a periodontal ligament during physiological re-absorption.

It is an interesting theory but takes us only one step further down the road to understanding since he does not explain the actual metabolic changes which he postulates.

If one looks closely at MacDonald's and Biederman's theories, one finds that they are compatible.

Resorption may be a discontinuous feature. If bone apposition proceeds too exuberantly at times when local metabolic factors are not maintaining an orderly resorption and laying down of Sharpey's fibres, a bone-to-cementum bridge may occur. This may be in the presence or absence of a succedaneous tooth. This still does not, however, explain the underlying reason for the changes that result in loss of the Sharpey's fibres.

The authors wish to thank Drs. J. A. Reid, B. K. Arora and G. A. Riekman for the use of some of the cases presented.

Dr. Ruprecht is associate professor at the Department of Diagnosis and Oral Radiology, University of Saskatchewan, Saskatoon.

Dr. Wright is professor at the Department of Paediatric and Community Dentistry, University of Western Ontario, London.

- 1 Lamb, K. A. and Reed, M. W. Measurement of space loss resulting from tooth ankylosis. *J Dent Child* 35:483, 1968.
- 2 Brearley, L. J. and McKibben, D. H., Jr. Ankylosis of primary molar teeth. *J Dent Child* 40:54, 1973.
- 3 Biederman, W. The incidence and etiology of tooth ankylosis. *Amer J Orthodont* 42:921, 1956.
- 4 Idem. Etiology and treatment of tooth ankylosis. *Amer J Orthodont* 48:667, 1962.
- 5 Thornton, M. and Zimmerman, E. R. Ankylosis of primary teeth. *J Dent Child* 31:120, 1964.
- 6 Worth, H. M. Principles and practice of oral radiologic interpretation. Chicago. Yearbook Medical Publishers, 1963.
- 7 Hemley, S. Orthodontic theory and practice. New York. Grune & Stratton, Inc. 1953.
- 8 Parker, W. S., Frisbe, H. E. and Grant, D. S. Experimental production of dental ankylosis. *Angle Orthodont* 34:103, 1964.
- 9 Rubin, P. L. and Biederman, W. Attempt to produce tooth ankylosis. *J Dent Res* 40:744, 1961.
- 10 Via, W. F. Submerged deciduous molars: familial tendencies. *J Amer Dent Ass* 69:127, 1964.

TECHNIQUE DENTOFORM MODELS

for

PERIODONTIA AND ORAL SURGERY

Natural-rooted plastic teeth, with calculus, mounted in gums and bone with a variety of defects.

Suitable for numerous exercises, including flapping, trimming, suturing, scaling, extractions and x-ray.

Soft gingival tissues are replaceable, as are the teeth.

Catalog available on request.

COLUMBIA DENTOFORM CORPORATION

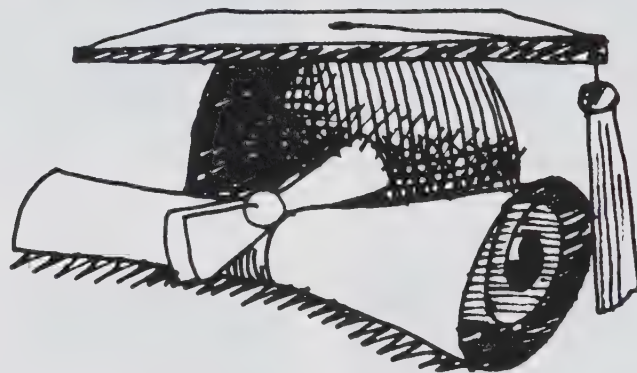
A SYNTEX COMPANY

49 East 21st Street

New York, N.Y. 10010

Visit our booth No. 445 at the
CDA/FDI Meeting in Toronto.

Because you are... an Educated Man



You enjoy a title of respect in an honoured profession

You enjoy a rich inheritance from educated men who preceded you

You are part of a great tradition:

As an educated man, you share a special obligation to help preserve and extend this heritage for future generations

When you give to the Canadian Fund for Dental Education you help protect the standards and prestige of your profession by supporting CFDE's programs in behalf of dental education and dental care. If you haven't given yet to CFDE this year, please mail your tax-deductible contribution to:

Canadian Fund for Dental Education,
Suite 205, 44 Eglinton Avenue West,
Toronto, Ontario M4R 1A1



CANADIAN FUND FOR DENTAL EDUCATION

Your avenue for giving, to enhance the performance
and prestige of Dentistry

CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE.

Direct advertising copy to:
Marie Cosgrave, Classified Advertising Manager,
Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6,
Telephone: (613) 523-1770.

CLASSIFIED ADVERTISING RATES (Per Insertion Per Issue):

Minimum (50 words or less)	\$15.00
Each additional word	.30
Service charge for C.D.A. Box No.	2.00

DISPLAY CLASSIFIED ADVERTISING RATES: Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box,
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

ASSOCIATESHIP AVAILABLE

BRITISH COLUMBIA — Fernie. Full-time associate required with option to buy in about a year. Contact: Dr. R. H. Campbell, Box 130, Fernie, B.C.

BRITISH COLUMBIA — Kamloops. Preventive oriented practice in busy shopping centre requires an associate. Apply: Dr. B. Dextraze, #21 - 750 Fortune Drive, Kamloops, B.C. phone: 376-5354.

BRITISH COLUMBIA — Victoria. Young, associate dentist required. Four-chair modern operatories. Strictly Medical-Dental building (opposite Jubilee General Hospital). General anesthesia privileges. Family-oriented practice. No capital outlay. Reply: Dr. B. Rauch, #310 - 1900 Richmond Ave., Victoria, B.C. V8R 4R2.

ALBERTA — Banff. Associate wanted for busy family practice established 27 years. Hygienist services; Panelipse. Contact: Dr. G. E. Barker, Box 548, Banff, Alta. T0L 0C0. Phone: (403) 762-3789 (home).

ALBERTA — Edmonton. Immediate opportunity for an associate in a general preventive group practice. Contact: North Central Dental Associates, 13030 82nd St., Edmonton, Alta. T5E 2T2. Phone: (403) 478-6691.

SASKATCHEWAN — Saskatoon. Full-time associate required in a busy high gross family practice. Two fully modern operatories available to associate in five-chair office. Possibility of purchase or partnership. Modern, air-conditioned Medical-Dental Building. Contact: Dr. R. E. Dickson, 621 Medical Arts Building, Saskatoon, Sask. S7K 3H3, phone: 653-3173 (home).

ONTARIO — Winchester. Associate required for established associateship practice in Winchester, 30 miles south of Ottawa. Available immediately on a full- or part-time basis. Modern 2000 square-foot office with six operatories, Cox equipment, Panelipse, and large lab area. Office includes Hygienist and Denture Therapist. Good opportunity. Contact: Dr. R. D. Wells, (613) 774-2616, or write: Box 729, Winchester, Ont. K0C 2K0.

NOVA SCOTIA — Halifax. Opening for dentist in well established associate practice. Offices located in central area of metropolitan Halifax. Reply to CDA Box Number 1724.

OFFICES AND PRACTICES

BRITISH COLUMBIA. Must sell for health reasons. Gross \$200,000/annum on mainly crown and bridge practice on 4½-5 day week. Two operatories equipped with Dental-Eze chairs and Webber equipment. Sacrifice price. Reply to CDA Box Number 1722.

BRITISH COLUMBIA — Abbotsford. Dental office for rent in modern professional building in Abbotsford, adjacent to hospital. Panoramic view. Apply: McCallum Terrace Holdings, 2151 McCallum Rd., Abbotsford, B.C. V2S 3N8.

BRITISH COLUMBIA — Grand Forks. Office space for lease in a new 2,400 sq. ft. clinic. Two fully equipped modern operatories, Nitrous Oxide, Panarex, Audio Visual and Home Care rooms, etc. Will be sharing clinic with another dentist. Waiting room and reception area will be shared. Just step right in and begin your practice, with no worries about equipment or patients. Contact: Dr. Mark O'Neill, Box 1120, Grand Forks, B.C. V0H 1H0. Phone: (604) 442-2177.

BRITISH COLUMBIA — Terrace (North-west). For sale. Large well established preventive oriented practice. Three operatories, a staff room and doctor's private office. Modern equipment to utilize four-handed dentistry. Ideal starter practice. Reasonably priced. Contact: Dr. L. J. Talarico, 4546 #10, Park Ave., Terrace, B.C. V8G 1V4.

BRITISH COLUMBIA — Victoria. Dental building for sale in downtown Victoria. Five operatories, lab, waiting room, two reception areas, dark room, private office. 1150 sq. ft. Adjoining space (private entrance) rented on one year lease. Five parking spaces in rear of building. Practising owner would consider renting space or associating. Reply to CDA Box Number 1716.

BRITISH COLUMBIA — West Vancouver. Well-established, high-gross, ultra-modern, three operator preventive-oriented practice for sale. Fully equipped, including dental education room, panorex and bitewing x-ray equipment, and many special features. Contact Barbara Johnson, (604) 926-6051.

ALBERTA — Calgary. For Sale: Calgary practice with high gross. Three fully equipped operatories with modern equipment. Space for fourth operator. Reply to CDA Box Number 1662.

ALBERTA — Calgary. Seven-year-old, two-man, quality practice in desirable north-west area. Modern, one-year-old office in new professional building. Seven operatories, four fully equipped, three complete except for chair and unit. Suitable for one to three dentists. Apply: Box 10, site 23, RR 2, Calgary, Alta. T2P 2G5. Phone: (403) 286-5030.

ALBERTA — Edmonton. For Sale: Very busy dental practice, available immediately. Five fully equipped operatories, and more than enough work for two full-time practitioners. Located at busy intersection in the west end of city. 1,000 sq. ft., with five year lease available. Write: Dr. Dresen, 15301 - Rio Terrace Drive, Edmonton, Alta. Phone: (403) 487-1525.

ALBERTA — Elk Point. Twenty-year-old "rural" practice for sale in small north-eastern Alberta town, 700 sq. ft. office with three operatories. Hospital privileges, high gross, low overhead. Excellent opportunity for immediate take over. Ideal outdoor recreation area with lakes and hunting. No cash outlay required. Reply to CDA Box Number 1692.

ONTARIO — Cannington. Golden opportunity awaits any dentist setting up practice in Cannington, 70 miles north-east of Toronto. Rapidly developing small town of 1,500. Local hospital privileges. New medical centre with spacious fully serviced dental suite. Present part-time dentist leaving to concentrate on his city practice but might sell some equipment. Apply: Box 370, Cannington, Ont. L0E 1E0. Phone: (705) 432-2569.

ONTARIO — Hawkesbury. Space for rent in newly constructed commercial center on Main St. in Hawkesbury. Four stores fronting Main St. and eight units at the rear at street level through an 8' arcade corridor. Available in areas of 600' or more. Accessible from street or entrance from parking lot for 160 cars. Dentists urgently required in this area. Apply to: Assaly Realities of Hawkesbury, 129 Main St. E., Hawkesbury, Ont. Phone: (613) 632-2719.

ONTARIO — Kingston. Associate/For Sale: Well established family practice with modern equipped operatories — analgesia, audio-visual. Excellent opportunity for one or two preventive-oriented dentists. For further details, reply to CDA Box Number 1721.

ONTARIO — London Area. Sacrifice — health reasons. New six-year practice available immediately. Exceptional opportunity for graduate or dentist seeking relocation. Phone: (519) 527-1530 (collect).

ONTARIO — London. Practice for sale or lease in north-east section. Four operatories, open concept, in Medical Clinic. Phone: Dr. P. Hough, (519) 455-7650.

ONTARIO — Ottawa. Beautiful new building, ideal for dental practice. Location: 305 Presland Ave., Ottawa. High residential area. Private Parking. Apply within, or phone (613) 745-8359.

ONTARIO — Ottawa. Established professional buildings located in south central commercial-residential district on public transport routes, close to medical and hospital facilities. All building services provided. One existing dental office includes partitioning, plumbing, lab, and washroom. Available immediately. Professional management by Riverside Terrace (Ottawa) Ltd. Leasing enquiries, phone: (613) 232-7361.

ONTARIO — Ottawa. Associateship or Sale: This is a busy well established practice situated in downtown Ottawa in modern professional building. Ideal opportunity for dentist who wishes to relocate, or recent graduate. Reply to CDA Box Number 1696.

ONTARIO — Tilburg. Dentist required to take over very busy town practice, established five years in custom built office, located 30 miles from Windsor, Ontario. Full book provided. Only purchase necessary is for dental equipment and supplies. Owner re-locating in west. Phone: (519) 682-0766. Evenings.

QUEBEC — Montreal. Four year established general practice in the west-end area. Four operatories, two fully equipped. Excellent opportunity for one or two prevention-oriented dentists. One thousand square feet, commercial laboratory next door. Yearly gross income near one hundred thousand dollars. Owner specializing. Please reply to CDA Box Number 1709.

OPPORTUNITIES AVAILABLE

ALBERTA — Athabasca. Athabasca Health Unit requires two Dental Auxiliary-Hygienists and one Dental Assistant. Salary in accordance with qualifications and experience, as per the Athabasca Health Unit salary schedule. Please submit applications to: Mrs. Star Vanstone, Director, Box 1140, Athabasca, Alta. T0G 0B0. Phone: 675-2231.

MANITOBA — Winnipeg. Applicants are invited for a full-time position in Oral Pathology in Department of Oral Biology, the University of Manitoba. Duties include graduate and undergraduate teaching and research in combined general and oral pathology courses as well as working in a biopsy service. Applicants must hold higher qualifications to practise oral pathology in Manitoba or be prepared for further training. Rank and salary dependent upon qualifications and experience. Applications with curriculum vitae and names of three referees should be forwarded by November 1st, 1977 to: Dr. Christopher Lavelle, Department of Oral Biology, Faculty of Dentistry, the University of Manitoba, Winnipeg, Manitoba, R3E 0W3.

ONTARIO — Dental Underserved Areas. The Ontario Ministry of Health offers financial support for dentists to establish practices in designated underserved dental areas. Locations are available throughout Ontario. Incentive grants, payable over four years, are \$18,000 in Northern Ontario, and \$14,000 in Southern Ontario. Alternatively, a guarantee net professional income of \$28,000 per annum is offered in Northern Ontario. A limited number of salaried positions are open on mobile dental coaches. Apply to: Dental Officer, Program for Underserved Areas, 7 Overlea Blvd., Toronto, Ont. M4H 1A9. Phone: (416) 965-5036.

ONTARIO — Lucknow. Dentist required for Lucknow and District Community Health Centre presently staffed by three full-time doctors. Area designated by the Ontario Department of Health as being under-served for dentistry. Excellent business potential. For more details contact: A. E. Herbert, Clerk-treasurer, Box 40, Lucknow, Ontario N0G 2H0.

ONTARIO — Merrickville. Community built medical centre needs dentist. No dentist within 25 miles accepting new patients. Tenant may choose layout, over 1000 square feet available, air-conditioned. Six months free rent offered with two year lease. Apply to: Merrickville District Medical Centre, Box 141, Merrickville, Ontario, K0G 1N0, or phone: (613) 269-3335.

ONTARIO — Timmins. Hygienist required for modern six operatory practice serving two dentists in northern Ontario. Starting September 1977. For further information please call collect: (705) 267-3900.

QUEBEC — Montreal. Wanted experienced dentist to operate and maintain a top dental practice in Montreal. Must be a capable general dentist. Opportunity for partnership to right person. Three modern operatories, fully equipped laboratory, and experienced staff with hygienist. At present an interesting and profitable situation. Reply to CDA Box Number 1720.

QUEBEC — Montreal. McGill University Faculty of Dentistry, FIXED PROSTHODONTICS: Applications are invited for a full-time faculty position in the Department of Fixed Prosthodontics. Advanced training from an accredited post-doctoral program in prosthodontics with an emphasis in fixed prostheses is required. Clinical teaching experience is highly desirable. Applicants must be prepared to meet the requirements for licensure in the Province of Quebec. Academic rank and salary of the successful applicant will be dependent upon qualifications and experience. Enquiries, accompanied by curriculum vitae, will be received in confidence by: Chairman, Search Committee, Department of Fixed Prosthodontics, McGill University Faculty of Dentistry, 3640 University St., Montreal, P.Q.

QUEBEC — Montreal. Faculty of Dentistry — McGill University: Applications are invited for a full-time teaching position in the pre-clinical and clinical areas in the Department of Operative Dentistry. Such applications may also be considered for the Chairmanship of this department which is now vacant. Applicants must be graduates of an accredited dental program and preferably, have Graduate training in Restorative Dentistry. Preference will be given to those applicants who have private practice and teaching experience. Candidates must be eligible for licensure by the Order of Dentists of Quebec, and be prepared to fulfill French language requirements. Academic rank and salary will be commensurate with qualifications and experience. Please send curriculum vitae with references to: Chairman, Search Committee, Department of Operative Dentistry, Faculty of Dentistry, McGill University, 3640 University St., Montreal, P.Q. H3A 2B2.

QUEBEC — Montreal. McGill University, Faculty of Dentistry, Department of Oral Surgery: Applications are invited for a full-time faculty position in the Department of Oral Surgery. Advanced training from an accredited post-doctoral program in oral surgery is required. Clinical teaching experience is highly desirable. Applicants must be prepared to meet the requirements for licensure in the Province of Quebec. Academic rank and salary of the successful applicant will be dependent upon qualifications and experience. Enquiries, accompanied by curriculum vitae, will be received in confidence by: Chairman, Search Committee, Department of Oral Surgery, McGill University, Faculty of Dentistry, 3640 University St., Montreal, P.Q. H3A 2B2.

WEST INDIES — Jamaica. International Health Work: Dentists are needed to work in Jamaica's community dental health programme. For more information about these challenging positions please contact: CUSO Health — 100, 151 Slater St., Ottawa, Ont. K1P 5H5.

DRUMMOND MEDICAL 1414 DRUMMOND, MONTREAL, QUEBEC

Medical & Dental
offices available

Locaux disponibles pour
Medecins & Dentistes

FACILITIES

- | | |
|-----------------------------|---------------------------|
| • Indoor Parking | • Stationnement intérieur |
| • Doorman | • Portier |
| • Wheelchair | • Chaise Roulante |
| • Tel. Ans. Service | • Service Téléphonique |
| • Centrally Air Conditioned | • Climatisation Centrale |
| • Pharmacy | • Pharmacie |
| • Centrally Located | • Centre Ville |
| metro, banking, YMCA | métro, banque, YMCA |

TRIZEC: 861-9393

The Extraoral Film Story

in Panoramic Black and White.

Extraoral radiography used in conjunction with intraoral radiography tells the whole story.

After you've made periapical, or interproximal, or occlusal X-ray studies of your patient, you may find that in addition, you need a broader scope of information for your diagnosis.

You get it with extraoral radiography—in examinations of the mandible and the maxilla that call for a panoramic view of the oral structures on a single radiograph.

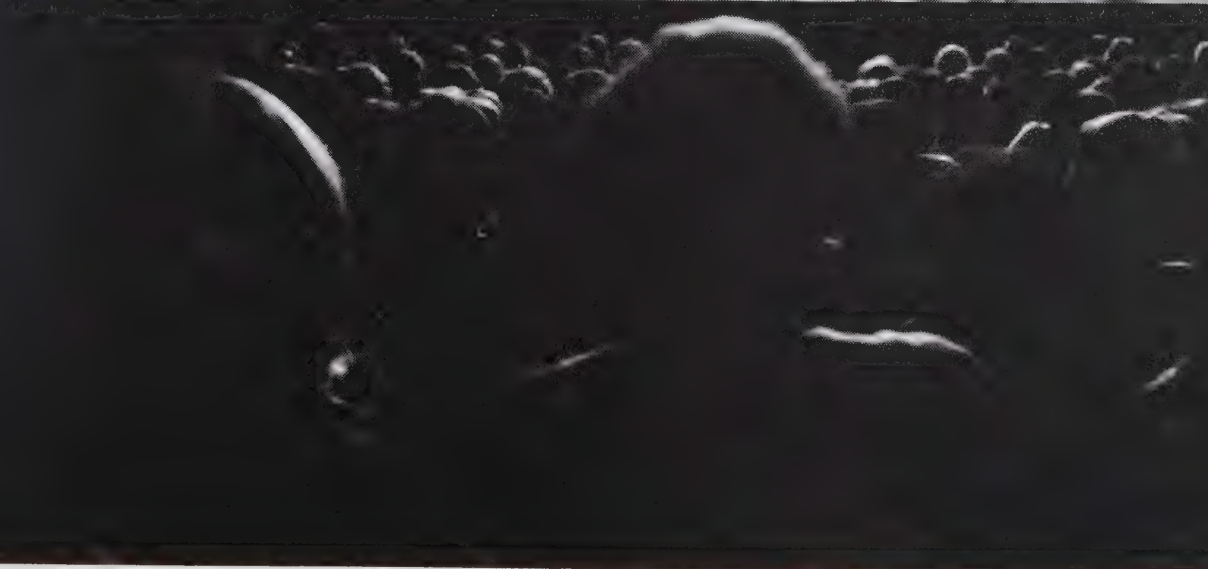
Kodak films for both extraoral and intraoral radiography give you high quality informative radiographs. And with proper processing, you'll need only a minimum of exposure.

For more information about our panoramic dental X-ray film, write:

Radiography Markets, Kodak Canada Ltd.,
3500 Eglinton Avenue West, Toronto, Ontario
M6M 1V3; or call a Kodak representative to
arrange an appointment.



a commitment
to quality



We think sponsoring your dental education is a good investment.

During University, we are prepared to offer you:

- Tuition, books and instruments. Paid.
- Salary all year . . . as officer cadet for the 1st year, as 2nd. Lieutenant for subsequent years. If tuition is paid for 3 years or less, you will receive 2nd. lieutenant's pay throughout.
- Summer employment and training.
- Four weeks paid vacation.

Your graduation will bring you even more:

- Promotion to the rank of Captain.
- Excellent pay and career potential
- Extensive dental experience
- Modern equipment and methods
- Qualified auxiliary support
- A truly preventive-oriented practice.
- A fraternity of working professionals.
- The opportunity to continue your education and specialty training.
- The opportunity to practice quality dentistry without financial restraints and to become a polished professional.

For further information about our Dental Officer Training Plan, contact your nearest Canadian Forces Recruiting Centre or write to the Director of Recruiting and Selection, National Defence Headquarters, Ottawa, Ontario.



**ASK US
ABOUT YOU.**



**THE CANADIAN
ARMED FORCES.**

PERIODONTIST

Dalhousie University Faculty of Dentistry

Applications are invited for a full-time position in Periodontics. Responsibilities of the appointee will be in the areas of undergraduate teaching, postgraduate teaching and research. Extra mural private practice would be considered. Applicants must have specialty qualifications in Periodontics, preferably a Masters or higher degree. Academic rank and salary will be dependent on qualifications and experience.

Letters of applications and curriculum vitae should be directed to:

Dr. D. G. Pentz
Head, Division of Periodontics
Faculty of Dentistry
Dalhousie University
Halifax, Nova Scotia
B3H 3J5

DALHOUSIE UNIVERSITY

POST-GRADUATE PROGRAM IN PERIODONTICS

The Division of Periodontics announces the commencement of a Post-Graduate Program in Periodontics. This program which is of two years' duration provides both research and clinical experience leading to a Diploma in Periodontics.

Applications are being accepted for September 1, 1978.

Inquiries should be directed to:

Dr. W. I. Vogan
Director, Post-Graduate Programme in Periodontics
1318 Robie Street
Halifax, Nova Scotia
B3H 3J5

DENTISTS REQUIRED

Excellent opportunity for dentists who would like to participate in a Children's Dental Care Program.

The program features the latest concepts in dental health education, prevention and treatment for children up to 12 years of age. Most children are receiving services on a maintenance care basis.

Clinics have modern equipment for sit-down four-handed dentistry. Dental hygienists and formally trained dental assistants complete the dental health teams.

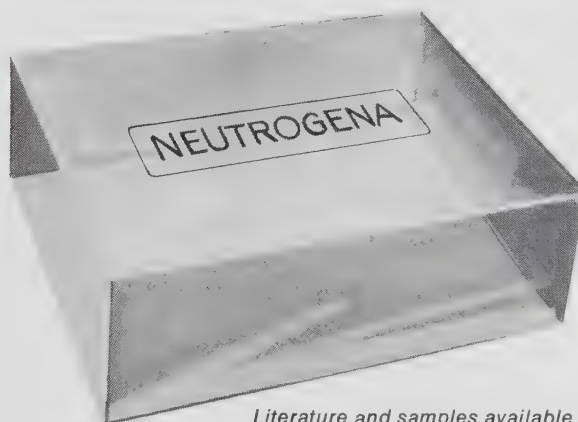
License to practice in P.E.I. is necessary. Starting salary up to \$28,750* depending on experience and qualifications.

Apply: Director, Division of Dental Public Health
Department of Health, P.O. Box 3000
Charlottetown, P.E.I., C1A 7P1

*Under review

**If you wash your hands
50 times a day
(as most dentists do)**

You need Neutrogena



Literature and samples available on request



PROFESSIONAL PHARMACEUTICAL CORP.
2795 BATES ROAD, MONTREAL 251, QUEBEC • (514) 739-3633

OPPORTUNITY WANTED

ALBERTA. Experienced young dentist wishes locums for up to three months, possibly on a continuing basis, to free practitioner for travel, study, etc. Reply to CDA Box Number 1723.

MANITOBA. British dentist with several years' experience in all phases of dentistry especially crown and bridge, wishes to relocate in Manitoba. Would consider associateship offers, or purchase of practice offers, either rural or urban. Available December or January 1978 (taking Manitoba examinations in November 1977). Reply to CDA Box Number 1719.

PEDODONTIST, aged 28, married, completing two-year hospital residency (7/1/78). Excellent background in anesthesia, handicapped patients, orthodontics; private practice experience, passed N.D.E.B.'s. Desires associateship or purchasing of private practice in small community. Mountainous area preferred, but will consider any province. Contact: Dr. Gary Breen, 2171 South Commons Roads, Reynoldsburg, Ohio 43068, U.S.A. Phone: (614) 866-1391.

EQUIPMENT FOR SALE

ALBERTA — Edmonton. For Sale: Clev-dent model 80 Interoral U.V. light with curved handpiece. Used fewer than ten times. \$225.00. Contact Dr. William Swanson, No. 605 College Plaza Office Tower, 8215 - 112 Street, Edmonton, Alta. T6G 2C8.

MANITOBA — Winnipeg. For Sale: 1 Ritter 180, amber-tan colour; 1 Dentsply, split spectrum (Mediterranean design), used for 32 weeks. Will accept \$5,000.00 for each item or best offer. Please contact: Dr. R. E. Kirouac, #1 - 130 Marion Street, Winnipeg, Manitoba R2H 0T4, or phone: 247-4854.

MISCELLANEOUS

BRITISH COLUMBIA — West Vancouver. Mix work and pleasure with a mobile dental unit/vacation home by purchasing this 31' camperized grey-house bus. Completely self-contained with power, water, and air, and is completely outfitted as a dental office. All enquiries (604) 926-6051.

DENTIST WANTED

The village of Port Alice, situated on Northern Vancouver Island, requires a resident dentist. New office facility is available for rent. Most of the community (population 1800) is covered by a dental plan.

If interested, contact:

Council
Village of Port Alice
Box 130
Port Alice, B.C.
V0N 2N0

ADVERTISERS' INDEX

Ash Temple	439
Astra Pharmaceuticals (Canada) Ltd.	IBC
Belmont	415
Block Drug Co. Canada	389,405
L. D. Caulk Co. of Canada	417,418
Canadian Fund	448
Colgate Palmolive Ltd.	403,431
Columbia Dentoform	447
Commerce Drug	456
Cooper Laboratories Ltd.	401
Denco	387
Dentsply International	382,394,395, 410,411,432
Department of National Defense	452
Charles E. Frosst	386
Johnson and Johnson Ltd.	397-400
Kerr Canada	385
Kodak Canada Ltd.	451
Lever Brothers	407
Modent	409
C. V. Mosby	455
Novocol Chemical Mfg. Ltd.	421,443
Pelton and Crane	390,391
Procter and Gamble	381
Professional Pharmaceutical	453
Rostaert	408
Siemens Electric	IFC
Warner Lambert Canada Ltd.	OBC
Whaledent	393
Wrigley's	423,427,435, 436

Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.

IMPACT,
RESPONSE,
RESULTS
when you advertise in
The Journal of
The Canadian Dental
Association

PRIME EXPOSURE FOR
YOUR ADVERTISING

HIGHEST CIRCULATION
FIGURES IN CANADA

UNIQUE, WELL-PLANNED
EDITORIAL PROGRAM

EVERY ISSUE BILINGUAL

TOP QUALITY REPRODUCTION

COMPETITIVE RATES



Contact Business Manager:
JOURNAL OF THE CANADIAN
DENTAL ASSOCIATION
1815 Alta Vista Drive, Ottawa
Ontario K1G 3Y6
Telephone: (613) 523-1770



SAVE CHAIR TIME:

Mosby books can help you improve and expand your dental techniques.

New 4th Edition! **DENTAL RADIOLOGY.** By Arthur H. Wuehrmann, D.M.D., A.B. and Lincoln R. Manson-Hing, D.M.D., M.S. This practical, well-illustrated book focuses on taking both intraoral and extraoral radiograms, and analyzes factors which influence results. This edition has been substantially updated. The first nine chapters deal with fundamentals of radiology; remaining chapters examine such topics as: interpretation of the X-ray; radiographic surveys; and common diseases of the teeth and supporting structures. April, 1977. 512 pp., 404 illus. **Price, \$24.15.**

A New Book! **PATHWAYS OF THE PULP.** Edited by Stephen Cohen, D.D.S., F.I.C.D., F.A.C.D. and Richard C. Burns, D.D.S.; with 32 contributors. For comprehensive, up-to-date insights on endodontics consult this superbly illustrated book. It offers essential information on basic science, along with explicit discussions on important specific topics. Some of these include: access openings; canal cleaning; shaping and filling; periapical surgery; traumatic injuries; root restoration; legal aspects; and combined endodontic and orthodontic treatment. Over 1,700 illustrations help to guide you step-by-step through procedures described. October, 1976. 697 pp., 1,737 illus. **Price, \$34.15.**

New 2nd Edition! **ATLAS OF ORTHODONTIC PRINCIPLES.** By Raymond C. Thurow, B.S., D.D.S., F.A.C.D. Greatly expanded and revised, this new edition provides a comprehensive overview of basic concepts which underlie orthodontic diagnosis and treatment. Discussion of the craniofacial complex has been enlarged. You'll find special emphasis on: musculature of the head and neck; temporomandibular joints; ill effects such as acute TMJ disorders; occlusion in terms of its adaptability; and how orthodontics optimizes the environment to improve possibilities for normal function. More than 150 new illustrations enhance this informative edition. September, 1977. Approx. 432 pp., 432 illus. **About \$36.25.**

New Volume III! **CURRENT ADVANCES IN ORAL SURGERY.** Edited by William B. Irby, D.D.S., M.S.; with 16 contributors. This new volume focuses on contemporary technical advances in oral surgery. Recognized authorities examine such timely topics as: cardiopulmonary resuscitation; soft tissue management; primary care of the acute trauma patient; facial pain; and alloplastics in oral surgery. A discussion on the pathophysiology of injuries to the head and cervical spinal cord and related problems is of special interest — it is superbly illustrated with drawings of anatomical specimens, radiographs, EMI scans and angiograms. October, 1977. Approx. 576 pp., 332 illus. **About \$41.50.**

New Volume VII! **CURRENT THERAPY IN DENTISTRY.** Edited by Henry M. Goldman, D.M.D., F.A.C.D., F.I.C.D.; H. William Gilmore, D.D.S., M.S.D.; William B. Irby, D.D.S., M.S.; and Ralph E. McDonald, D.D.S., M.S. This new book, edited by leaders in your field, continues a reputation for excellence established by five previous volumes. Informative, up-to-date articles discuss recent developments in all major areas of dental science. More than 70 distinguished authorities offer practical advice on significant clinical advances in oral medicine; restorative dentistry; oral surgery; and pedodontics. In most cases, contributors describe the simplest, most effective solutions they would apply to a specific problem in their own practice. September, 1977. Approx. 650 pp., 893 illus. **About \$41.50.**

MOSBY
TIMES MIRROR

THE C. V. MOSBY COMPANY, LTD.
86 NORTHLINE ROAD
TORONTO, ONTARIO
M4B 3E5

ora-jel-D[®]

The professional denture anesthetic, antiseptic cream saves you chair time.

During the initial new dentures break-in period, patients encounter discomfort that can mean time-consuming office visits to you. Ora-Jel D can be an invaluable aid in your practice. Ora-Jel D starts relieving pain on application. It soothes irritated tissue — without masking the problem. Provides long-lasting pain relief during the critical denture adjustment period and builds patient confidence.

For all dentures, Ora-Jel D makes adjustment easier and faster because it eases pain. Ora-Jel D works just as effectively to relieve soreness and irritation caused by orthodontic appliances.

Ora-Jel D is an easy to use cream that your denture patients can apply at home — to relieve the pain of denture irritation. It also offers anesthetic and antibacterial action. And the relief lasts for hours.

Mail coupon for free professional sample. Ora-Jel D saves time at the chair and keeps problem patients happy.

COMMERCE DRUG (CANADA) LTD.
9190 Charles de Latour St.,
Montreal 355, Canada

Dept. No. J.C.D.A. 9

Name DENTAL LIBRARY

Address 124 EDWARD ST.
TORONTO 2

Zip _____

REGISTRATION FORM

5 TH ANNUAL
WORLD DENTAL CONGRESS
EDERATION
ENTAIRE INTERNATIONALE



TORONTO
CANADA

22-28
OCTOBER
1977

For advance registration return one copy with appropriate fees before
September 14, 1977; otherwise register at Congress.

Return to: 1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario, M5W 1X3
CANADA.

PLEASE TYPE OR USE BLOCK LETTERS; WHERE APPLICABLE CIRCLE APPROPRIATE RESPONSE

SURNAME: DENTAL LIBRARY INITIALS: _____ Prof./Dr./Mr./Mrs./Miss _____

ADDRESS: 124 EDWARD ST.
TORONTO 2

COUNTRY: _____ Language for documents: English / French / German / Spanish

FDI MEMBERSHIP:

Are you a supporting member of the FDI YES/NO

MEMBERSHIP REGISTRATIONS

F.D.I. Supporting Member — \$100 before or \$120 after July 1 —————→ \$ _____

Canadian Dental Association (Non FDI) Member \$115 before or \$130 after July 1 —————→ \$ _____

ADDITIONAL REGISTRATIONS (\$10 each: no fee for spouse or other family member)

REGISTRANT: _____ SURNAME: _____ INITIALS: _____

Spouse: _____

Family member: _____

Auxiliary: _____→ \$ _____

Student: _____→ \$ _____

MILITARY PERSONNEL ONLY

Rank: _____

Attending Military Conference and Field Visit to Base Borden — on Thurs., October 20 YES/NO accompanied YES/NO

SOCIAL PROGRAM

Congress Ball — Tues., October 25..... (\$30. per person; limited attendance) —————→ \$ _____

Canadian Hoedown — Fun Night — Wed., October 26..... (\$15. per person) —————→ \$ _____

LADIES PROGRAM

Fashion Show and Luncheon — Mon., October 24..... (\$12.50 per person) —————→ \$ _____

Sightseeing Tours — English Commentary

Toronto City — mornings — specify day..... Mon./Tues./Wed./Thurs.
(\$6 per person) —————→ \$ _____

Toronto City and Harbour (bus and boat) — mornings — specify day..... Mon./Tues./Wed./Thurs.
(\$7 per person) —————→ \$ _____

Niagara Falls — all day — specify day..... Mon./Tues./Wed./Thurs.
(\$22 per person including lunch) —————→ \$ _____

McMichael Canadian Art Gallery — 5 hours..... Tues., October 25
(\$12 per person including lunch) —————→ \$ _____

Antique — all day..... Thurs., October 27
(\$19 per person including lunch) —————→ \$ _____

TOTAL FEES (CANADIAN \$ ONLY) —————→ \$ _____

MAKE CHEQUES OR MONEY ORDERS PAYABLE TO FDI/CDA WORLD DENTAL CONGRESS

CANCELLATION CLAUSE

Ten per cent will be deducted from registration fees of registrants cancelling up to two months before the Congress and 20 per cent from those cancelling up to one month before the meeting. Money paid for social events by those not attending the meeting will be repaid in full. Money will not be refunded for tickets which cannot be resold during the Congress.

PRE AND POST CONGRESS TOURS

If you are interested in detailed information concerning Pre and Post Convention tours, please check here ☐

SIGNATURE _____ DATE _____

**65ème CONGRES
DENTAIRE MONDIAL ANNUEL
FEDERATION
DENTAIRE INTERNATIONALE**



**TORONTO
CANADA**

du 22 au 2
OCTOBRE
1977

Pour s'inscrire à l'avance, veuillez renvoyer un exemplaire avec le montant exact des droits au plus tard le 14 septembre 1977; après cette date, il faut s'inscrire pendant le Congrès.

Renvoyer à: 1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A,
Toronto, Ontario, M5W 1X3
CANADA.

VEUILLEZ DACTYLOGRAPHIER OU UTILISER DES LETTRES MAJUSCULES; SI NECESSAIRE VEUILLEZ ENTOURER LA REPONSE CORRECTE.

NOM _____ INITIALES _____ Prof./Dr./M./Mme/Melle _____
ADRESSE _____
PAYS _____ Langue pour les documents: Allemand / Anglais / Français / Espagnol

MEMBRE DE LA FDI:

Etes-vous membre sympathisant de la FDI OUI/NON

INSCRIPTIONS DES MEMBRES

Membre sympathisant de la FDI — \$100 avant le 1er juillet et \$120 après _____ \$
Membre de l'Association Dentaire canadienne (non FDI) \$115 avant le 1er juillet ou \$130 après _____ \$

INSCRIPTIONS SUPPLEMENTAIRES (\$10 chacune: gratuit pour les époux (ses) autres membres de la famille)

PARTICIPANT **NOM:** **INITIALES**
Epoux(se): _____ \$
Membre de la famille: _____ \$
Auxiliaire: _____ \$
Etudiant: _____ \$

PERSONNEL MILITAIRE UNIQUEMENT

Grade: _____

Assistera à la Conférence Militaire et la visite à la Base Borden — le jeudi 20 octobre OUI/NON accompagné OUI/NON

PROGRAMMES DES FESTIVITES

Bal du Congrès — Mardi 25 octobre. (\$30 par personne; participation limitée) _____ \$
Canadian Hoedown — "Nuit de rigolades" — Mercredi 26 octobre (\$15 par personne) _____ \$

PROGRAMME DES DAMES

Défilé de modes et déjeuner — Lundi 24 octobre (\$12.50 par personne) _____ \$
Visites guidées — commentaires en anglais
Cité de Toronto — matinées — préciser le jour. lun./mar./mer./jeudi
(\$6 par personne) _____ \$
Cité et port de Toronto (autobus et bateau) — matinées — préciser le jour. lun./mar./mer./jeudi
(\$7 par personne) _____ \$
Chutes du Niagara — toute la journée — préciser le jour lun./mar./mer./jeudi
(\$22 par personne, déjeuner compris) _____ \$
Galeries d'art canadien McMichael — 5 heures. mardi 25 octobre
(\$12 par personne, déjeuner compris) _____ \$
Antiquités — toute la journée jeudi 27 octobre
(\$19 par personne, déjeuner compris) _____ \$

**MONTANT TOTAL (\$ CANADIENS
UNIQUEMENT)** _____ \$

ADRESSER LES CHEQUES OU LES MANDATS DE PAIEMENT A L'ORDRE DE FDI/CDA WORLD DENTAL CONGRESS

CLAUSE D'ANNULATION

On déduira dix pour cent des droits d'inscription des participants qui annuleront deux mois, au moins, avant le Congrès et 20 pour cent des droits d'inscription pour ceux qui annuleront un mois, au moins, avant la session. On remboursera à ceux qui n'auront pas assisté au Congrès la totalité des sommes versées pour le programme des festivités. On ne remboursera pas toutefois le prix des billets qui n'auraient pu être revendus pendant le Congrès.

VISITES ANTERIEURES ET POSTERIEURES AU CONGRES

Si vous désirez recevoir des renseignements détaillés sur les visites antérieures et postérieures au Congrès, veuillez faire une marque ici ☐

SIGNATURE _____ DATE _____

HOTEL RESERVATION FORM

5 TH ANNUAL
WORLD DENTAL CONGRESS
FEDERATION
DENTAIRE INTERNATIONALE



TORONTO
CANADA

22-28
OCTOBER
1977

Copy to be returned with appropriate fees and the registration form before September 14, 1977 to:—

1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A
Toronto, Ontario M5W 1X3
Canada

For room reservations, please print or type three choices

t _____
d _____
d _____
DENTAL LIBRARY
124 EDWARD ST.,
TORONTO 2

Please enter my reservations at the above hotel for:

Angles Twin/
Doubles 1 Bdrm. Suites 2 Bdrm.
@ \$ _____ @ \$ _____ @ \$ _____ @ \$ _____

Rate requested is not available, the next highest will be
signed.

Please DO NOT send your request directly to the HOTEL;
WILL ONLY DELAY your confirmation. Please allow
two — three weeks to receive confirmation.

Room will be occupied by: (please print or type)

Name _____
Street _____
City _____ State _____ Zip _____
DENTAL LIBRARY
124 EDWARD ST.,
TORONTO

Additional Occupants _____

Date Arriving _____ AM
PM _____ Departing

THE DEADLINE FOR MAKING ADVANCE RESERVA-
TIONS IS SEPTEMBER 14, 1977.

Hotel	Single	Double/Twin	1-Bed Suite	2-Bed Suite
1. Royal York (Hdqt.)	\$35	\$45	\$70 - \$135 (Studio suites \$60 - \$70)	
2. Sheraton Centre	\$33 \$38 \$43 (Cabanas \$59)	\$40 \$47 \$52	\$85 to \$153 \$128 to \$196 (Hosp. Suites \$163 to \$203)	
3. Harbour Castle Hilton	\$35	\$42	\$70 - \$95 \$137	
4. King Edward	\$20	\$24 \$26	\$38 \$70	
5. Lord Simcoe	\$20	\$25		
6. Hotel Toronto	\$35	\$45	\$92 \$102 \$132 \$152 Add \$10 for double occupancy	
7. Holiday Inn Toronto Downtown	\$30	\$39 \$42		
8. Bond Place	\$20	\$24		
9. Chelsea Inn	\$25	\$29		
10. Carlton Inn	\$17	\$21		
11. The Westbury	\$29.50	\$36.50		
12. Sutton Place	\$36.50	\$44.50		
13. Town Inn	\$29	\$34		
14. Park Plaza	\$34	\$38		
15. Hyatt Regency	\$38	\$45		
16. Hotel Plaza II	\$28	\$35		
17. Inn On The Park	\$38	\$46		
18. Prince	\$34	\$40		
19. Holiday Inn Don Valley	\$32	\$42		
20. Ramada Inn - Toronto	\$29.50	\$36.50		
21. Bristol Place	\$33.50	\$35.50		
22. Cara Inn	\$28	\$35		
23. Constellation	\$34	\$42		
24. Skyline	\$30	\$36		
25. Toronto Airport Hilton	\$29 - \$37	\$37 - \$45		

Each of the above rates is quoted in Canadian Currency. Ontario sales tax — 7% not included.

WE STRONGLY URGE THAT YOU MAKE YOUR HOUSING RESERVATIONS EARLY, PARTICULARLY IF YOU PLAN TO ARRIVE ON SATURDAY. STATISTICS FROM THE TORONTO TOURIST INDUSTRY INDICATE A HEAVY INFLUX ON OCTOBER WEEKENDS.

(Please make all changes and cancellations in writing directly to the Organizing Committee).

Note: FDI business meetings and a portion of the scientific program will take place at the Royal York Hotel. The Dental Trade Show and other portions of the scientific program will take place at the Automotive Building, Exhibition Place.

**65ème CONGRES
DENTAIRE MONDIAL ANNUEL
FEDERATION
DENTAIRE INTERNATIONALE**



**TORONTO
CANADA**

du 22 au 28
OCTOBRE
1977

Prière de renvoyer un exemplaire avec le montant exact des droits et le bulletin d'inscription au plus tard le 14 septembre 1977 à l'adresse suivante:

1977 FDI/CDA Organizing Committee
P.O. Box 6423, Station A,
Toronto, Ontario M5W 1X3
CANADA

Pour les chambres d'hôtel, veuillez indiquer trois possibilités
(écrire ou dactylographier)

1er DENTAL LIBRARY
2ème 124 EDWARD ST.
3ème TORONTO 2

Veuillez me réserver à l'hôtel ci-dessus de(s) chambre(s):

Individuelle(s) à lits jumeaux/
lit double Suite(s)
1 Ch. 2 Ch.

☐ @ \$ _____ ☐ @ \$ _____ ☐ @ \$ _____ ☐ @ \$ _____

Si le tarif demandé ne peut être offert, le tarif immédiatement supérieur sera attribué.

Veuillez NE PAS envoyer votre réservation directement à l'HOTEL; cela NE FERA QUE RETARDER votre confirmation. Veuillez compter deux à trois semaines avant de recevoir votre confirmation.

La chambre sera occupée par (veuillez écrire ou dactylographier).

Nom DENTAL LIBRARY
Rue 124 EDWARD ST.
Ville TORONTO 2 Etat Canada Code postal _____

Autres occupants _____

Date d'arrivée _____ AM
_____ PM
date de départ

LES RESERVATIONS NE SERONT PLUS ACCEPTEES APRES
LE 14 SEPTEMBRE 1977.

Hôtel	Indiv.	L. jumeaux/ L. doubles	Suites 1 Ch.	Suites 2 Ch.
1. Royal York (Sec.G1.)	\$35	\$45	\$70 - \$135 (suites studio \$60 - \$70)	
2. Sheraton Centre	\$33 \$38 \$43 (Cabanas \$59)	\$40 \$47 \$52	\$85 à \$153 \$128 à \$196 (Suites Hosp. \$163 à \$203)	
3. Harbour Castle Hilton	\$35	\$42	\$70 - \$95	\$137
4. King Edward	\$20	\$24 - \$26	\$38	\$70
5. Lord Simcoe	\$20	\$25		
6. Hotel Toronto	\$35	\$45	\$92 \$102	\$132 \$152 Ajouter \$10 pour deux occupants
7. Holiday Inn Toronto Downtown	\$30	\$39 \$42		
8. Bond Place	\$20	\$24		
9. Chelsea Inn	\$25	\$29		
10. Carlton Inn	\$17	\$21		
11. The Westbury	\$29.50	\$36.50		
12. Sutton Place	\$36.50	\$44.50		
13. Town Inn	\$29	\$34		
14. Park Plaza	\$34	\$38		
15. Hyatt Regency	\$38	\$45		
16. Hotel Plaza II	\$28	\$35	(Suites sur demande \$75 - \$250)	
17. Inn On The Park	\$38	\$46		
18. Prince	\$34	\$40		
19. Holiday Inn Don Valley	\$32	\$42		
20. Ramada Inn - Toronto	\$29.50	\$36.50		
21. Bristol Place	\$33.50	\$35.50		
22. Cara Inn	\$28	\$35		
23. Constellation	\$34	\$42		
24. Skyline	\$30	\$36		
25. Toronto Airport Hilton	\$29 - \$37	\$37 - \$45		

Les tarifs ci-dessus sont indiqués en devises canadiennes. La taxe l'Ontario sur les ventes de 7% n'est pas comprise dans les prix

NOUS VOUS RECOMMANDONS VIVEMENT DE FAIRE VOS RESERVATIONS DE CHAMBRES D'HOTEL ASSEZ TOT, EN PARTICULIER SI VOUS AVEZ L'INTENTION D'ARRIVER UN SAMEDI. LES STATISTIQUES, FOURNIES PAR L'INDUSTRIE TOURISTIQUE DE TORONTO INDIQUENT UNE AFFLUENCE IMPORTANTE PENDANT LES WEEK-ENDS D'OCTOBRE.

(Veuillez procéder à tous les changements et annulations, en écrivant directement au Comité d'organisation.)

Note: Les réunions administratives de la FDI et une partie du programme scientifique se dérouleront au Royal York Hotel. L'exposition de l'industrie dentaire et l'autre partie du programme scientifique se tiendront à l'Automotive Building, Exhibition Place.



If you think waiting for anesthesia onset is hard on you, think what it's like for him.

The more you had to ask "Feel anything?" the more convinced your patient got that he was going to.

So another piece of dentistry got off to a tense start.

For both of you.

And that's why Astra Canada developed Citanest Forte for routine

ASTRA

Mississauga, Ontario

dentistry. It's fast. It's effective. Yet doesn't take all morning to wear off.

Citanest Forte from Astra. In the handy Kleen Pak.

It's making dentistry a whole lot easier for patients.

And a whole lot easier for you.



Citanest[®] FORTE

Next time you've got a gum chewer in your chair... hand out some good advice.

Give your patients Trident Sugarless Gum.

Many dentists recommend Trident Sugarless Gum to patients who chew gum. Trident is sugarless, so there's no risk of sugar damage to teeth. And because of Trident's long-lasting flavour, people enjoy chewing it. Trident can also be a worthwhile aid in your dental program for patients who chew gum. So the next time a patient asks about chewing gum, hand out Trident Sugarless Gum—a pack of flavour and good advice.



For dentists who don't want their patients to chew sugar when they chew gum.

THE TRIDENT PROFESSIONAL OFFER

Please send me Trident's Professional Offer consisting of 2 boxes of each flavour: Spearmint, Peppermint, Fruit and Cinnamon. A total of 8 boxes (144 packages) for \$10.00 (regular value: \$28.80). (Ontario dentists include 70¢ Provincial Sales Tax.)

Enclosed please find my cheque/money order in the amount of \$

Name DENTAL LIBRARY

Address 124 EDWARD ST.,

City TORONTO 2

Prov. ON Postal Code

Send to: Trident, Box 2147, Toronto, Ontario M5W 1H1



DENTAL JOURNAL DENTAIRE

Si non livrable
au destinataire
**RETOURNER A
L'EXPEDITEUR**
Port payé

If Undeliverable
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed.

Oct 1977/Volume 43/No 10

Canadian Dental Association/Association Dentaire Canadienne

D



OCTOBER IS CIDE MONTH

OCTOBRE LE MOIS DU FCED

OCTOCAINE
ISOCAINE
PRILOCAINE

Local Anaesthetics
of
Quality

NOVOCOL Chemical Mfg. Co., of Canada Ltd.
52 Chauncey Ave. Toronto, Ontario.

PRILOCAINE

HCl 4 %

Prilocaine Hydrochloride Injection
with Epinephrine 1:200,000

DIN 393746

NOVOCOL Chemical Mfg. Co., of Canada Ltd.
52 Chauncey Ave. Toronto, Ontario.

PRILOCAINE

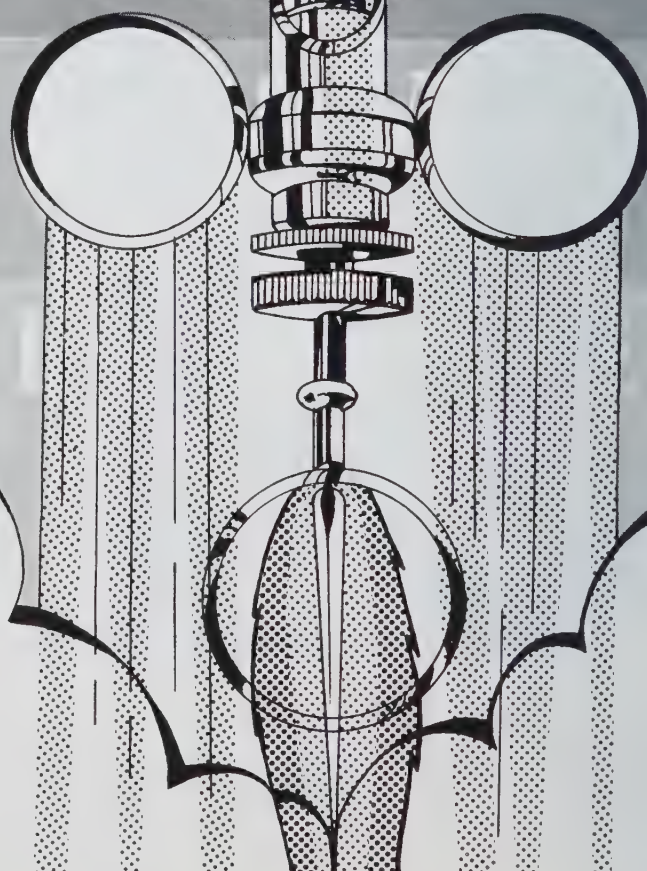
HCl 4 %

PRILOCAINE

HCl 4 %

PRILOCAINE

HCl 4 %



Tested & Trusted

Crest effectiveness has been proven in more clinical tests under more conditions than any other fluoride dentifrice

Percent DMFS Reduction*

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Normal home usage—young adults—J.A.D.A. 55:196, 1957



Normal home usage—young adults—J.A.D.A. 63:189, 1961



Normal home usage—children—J.A.D.A. 50:163, 1955



Normal home usage—children—J.A.D.A. 51:556, 1955



Normal home usage—children—J.A.D.A. 64:216, 1962



Normal home usage—children—J.A.D.A. 72:408, 1966



Normal home usage—children—J. Canad. Dent. Assn. 36:262, 1970



Normal home usage—children—J. Dent. Child. 37:501, 1970



Normal home usage—children—J. Canad. Dent. Assn. 38:35, 1972



Normal home usage—children—J. Canad. Dent. Assn. 38:155, 1972



Fluoridated water—children—J. Dent. Child. 38:211, 1971



Supervised brushing—children—J.A.D.A. 58:42, 1959



Supervised brushing—children—J.A.D.A. 64:217, 1962



Supervised brushing—children—J.A.D.A. 65:482, 1962



SnF₂ topical—children—J. Dent. Child. 28:5, 1961



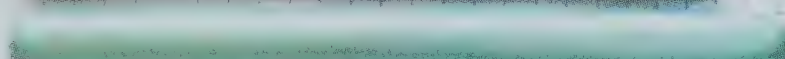
SnF₂ topical and prophylaxis—children—J.A.D.A. 70:914, 1965



SnF₂ topical and prophylaxis—children—J.A.D.A. 72:392, 1966



SnF₂ topical and prophylaxis—adults—J.A.D.A. 75:1402, 1967



SnF₂ topical and prophylaxis—adults—J.A.D.A. 77:594, 1968



"Crest has been shown to be an effective decay-preventive (anti-caries) dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."—Canadian Dental Association

For further information on these clinical studies, write to Crest Professional Services Division, P.O. Box 355, Terminal A, Toronto, Ontario

Confidence based on research=Crest

* (DMFS) New decayed, missing, or filled surfaces. All clinical studies conducted vs. null control. The control dentifrice was Crest without its stated actives.

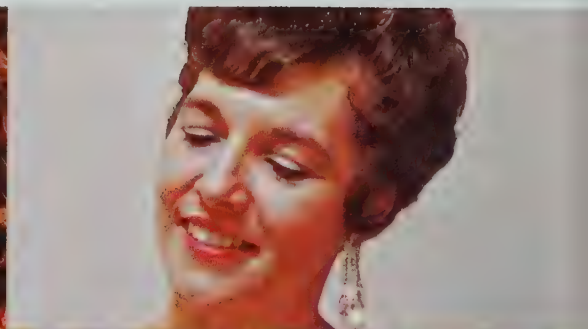
©1973 PROCTER & GAMBLE, TORONTO

CAS-380



In the flaming glory of an autumn leaf there is a simple logic: a harmony of form, size, color and arrangement.

The Trubyte® System uses the same logic to provide the point of departure for a beautiful denture.



Trubyte® Bloblend® Anteriors...expressions of
a simple, natural logic.

TRUBYTE

 Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1977 Dentsply International, Inc.
All rights reserved.

JOURNAL

of the Canadian Dental Association
de l'Association Dentaire Canadienne
Oct 1977/Volume 43/No 10

PUBLISHER: Canadian Dental Association
SCIENTIFIC EDITOR/R. S. Turnbull, DDS
EDITOR: Diane Charter
FRENCH SCIENTIFIC EDITOR: Robert Lambert, DDS

MANAGING EDITOR: ADVERTISING Anna Spencer
EDITORIAL SECRETARY: Mary Maxwell
CLASSIFIED ADVERTISING: Marie Cosgrave
CIRCULATION: Cathy Cronin

ISSN 0382-8514

Editorial

October is once again CFDE month	468
Encore une fois, octobre, le mois du FCED	471

Special Feature

"Since what we choose is what we are . . ."	473
"L'objet de notre choix: ce que nous sommes . . ."	474

Regular Features

Announcements	464
Dentistry in the news	478
Deaths	484
Les actualités dentaires	486

Articles

Biopsies: Clinical and laboratory considerations — Trott and Morrow	492
CDA Council for Dental Materials and Devices Status Report: Periodontal dressings	501
Aetiology and investigation of the sore mouth — Brooke and Seganski	504

Classified Advertising	507
------------------------	-----

Advertisers' Index	510
--------------------	-----

Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1977 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454.

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association.

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1977 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22).

Veuillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences. Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise.

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Announcements/Avis

Canadian Dental Association

1977, Toronto, October 22-28
1978, Winnipeg, September 10-13.

**Fédération Dentaire Internationale
65th Annual World Dental
Congress**, 1977, Toronto, October
22-28. FDI/CDA Congress Office:
P.O. Box 5423, Terminal A, Toronto,
Ontario M5W 1X3.

Canadian Meetings

**Canadian Academy of Restorative
Dentistry**, Annual Meeting, Park
Plaza Hotel, Toronto, October 19-21,
1977, just prior to the FDI World
Dental Congress. Contact: Dr. D.B.
McAdam, Associate Professor,
Department of Restorative Dentistry,
University of Toronto, 124 Edward
Street, Toronto, Ontario M5G 1G6.

**Canadian Association of Ortho-
dontists**, Annual Meeting, Hyatt Re-
gency Hotel, Toronto, October 20-23,
1977, just prior to the FDI World
Dental Congress. Contact: Dr. J.
Schacter, P.O. Box 952, Saskatoon,
Saskatchewan S7K 3M4.

**Canadian Society of Public Health
Dentists**, Annual Meeting, Sheraton
Centre, Toronto, October 23, 1977, in
conjunction with the FDI World Dental
Congress. Contact: Dr. D. Lewis, Fa-
culty of Dentistry, University of
Toronto, 124 Edward St., Toronto,
Ontario M5G 1G6.

**Canadian Academy of Oral Radi-
ology**, Annual Meeting, Sheraton
Centre, Toronto, October 23, 1977, in
conjunction with the FDI World Dental
Congress. Contact: Dr. D.W. Stone-
man, Faculty of Dentistry, University
of Toronto, 124 Edward St., Toronto,
M5G 1G6, or, Dr. Carl Hawrish, 5064
Dentistry Pharmacy Centre, University
of Alberta, Edmonton, T6G 2H7.

**Canadian Dental Hygienists Associa-
tion**, Annual Meeting, Bond Hotel,
Toronto, October 23-27, 1977, in con-
junction with the FDI World Dental
Congress.

**Canadian Dental Nurses and Assist-
ants Association**, Annual Meeting,
Holiday Inn, Civic Square, Toronto,
October 23-27, 1977, in conjunction
with the FDI World Dental Congress.

Canadian Society of Oral Surgeons,
Annual Convention, Hyatt Regency
Hotel, Toronto, October 28-31, 1977,
following the FDI World Dental Con-
gress. Contact: Dr. W. Prusin, Con-
vention Chairman, 919 Ellesmere Rd.,
Scarborough, Ontario M1P 2W7.

Royal College of Dentists of Canada,
Medical Sciences Auditorium, Univer-
sity of Toronto, October 29, 1977,
following the FDI World Dental Con-
gress.

Canadian Academy of Endodontics,
Annual Meeting, Hyatt Regency Hotel,
Toronto, October 29-30, 1977, follow-
ing the FDI World Dental Congress.
Contact: Dr. J.M. Phillips, 12½ Sim-
coe St., South, Oshawa, Ontario
L1H 4G2.

**Canadian Society of Forensic Sci-
ence, Odontological Section**, Chateau
Lacombe, Edmonton, November 3-5,
1977. Contact: Dr. R.B.J. Dorion,
Suite 710-D, Sun Life Building,
Montreal, Quebec H3B 2V6.

Ontario Society of Clinical Hypnosis,
Two Workshops to run concurrently,
Royal York Hotel, Toronto, November
11-13, 1977. (1) Introduction to clini-
cal hypnosis; (2) Practical therapeutic
applications of hypnosis. Contact: Dr.
Alan Banack, OSCH, 243 St. Clair
Ave. West, Toronto, Ontario
M4V 1R3. Phone: (416) 922-8300.

**Montreal Dental Club Pre-
Convention Seminar**, Queen
Elizabeth Hotel, Montreal, November
12-13, 1977. Contact: Miss M.
Komarnicka, 55 LaFlaur St., Ville La
Salle, Quebec H8R 3G7.

Montreal Dental Club Fall Clinic,
Queen Elizabeth Hotel, Montreal,
November 14-16, 1977. Contact: Miss
M. Komarnicka, 55 LaFleur St., Ville
La Salle, Quebec H8R 3G7.

Academy of Dentistry, Winter Clinic,
Royal York Hotel, Toronto, November
24, 1977. Contact: Mrs. P. Williams,
Executive Secretary, Academy of Den-
tistry, 234 St. George St., Toronto,
Ontario M5R 2P2.

**Ontario Society for Preventive Den-
tistry**, Toronto, December 2-3, 1977.
Speaker: Dr. Emmanuel Cheraskin on
nutrition and improving the health of
the dental family. Contact: Dr. Hans
Viergever, 70 Melvin St., Hamilton,
Ontario L8H 2J5.

**Ontario Dental Association and Den-
tal Society of the State of New York**,
Joint Convention, Sheraton Centre,
Toronto, May 14-17, 1978. Contact:
Mrs. W.C. Durham, 234 St. George
St., Toronto, Ontario M5R 2P2.

Les Journées Dentaires du Québec,
Quebec Hilton Hotel, Quebec City,
May 28-31, 1978. Contact: Dr. R.M.
Lang, 5171 Decarie Blvd., Montreal,
Quebec H4W 3C2.

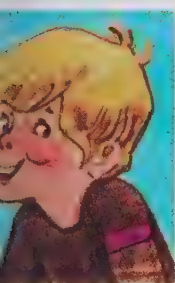
**Pacific Dental Federation Con-
vention**, Vancouver, July 23-26, 1978.
Contact: Dr. Ken Neuman, President,
Pacific Dental Federation, 1125 West
8th Avenue, Vancouver, British Col-
umbia V6H 3N4.



**a
BUTLER
mouth
is a
healthy
mouth**



**a
BUTLER
mouth
is a
clean
mouth**



*Single Source
for All Preventive Aids*

ONLY Butler GIVES YOU A PROFESSIONAL APPROACH TO TOOTHBRUSH SELECTION.

The professional features of the
Butler G·U·M® #411 brush

1. Exclusive dome-shaped trim prevents bristle "bunch-up" problem at inter-proximal areas.
2. Exclusive rounded and tapered bristles reach deepest crevices, sulcus and inter-dental areas.
Extra feature: Butler "Velvet-Tip®" bristles with satinized finish remove plaque more effectively than ordinary polished bristles.
3. New formula stimulator tip has more body, stays flexible longer. Easily removable if contra-indicated.
4. Comfort-sized, narrow head has rounded corners for complete, gentle access to all areas of posteriors.
5. Super easy-grip wide handle is designed to fit the palm, for better control of proper brushing technics.
6. Exclusive Perio-pick hole in handle. Holds any round toothpick.

And only Butler has a complete line of specially designed brushes for orthodontic, partial, sulcular, denture and inter-proximal use. So the next time you recommend or dispense a toothbrush—choose one from the professional Butler line.

Butler Preventive Aids include: floss, floss handles, floss threaders, mouth mirrors, disclosants, brushes and dental health control kits. All are available at special professional rates, and for your recommendation at better drug stores.



**a
clean
mouth
is a
healthy
mouth**



THE PROFESSIONAL LINE



#411P
Adult
G·U·M
4-Row



#311P
Tween
G·U·M
3-Row



#111P
Junior
G·U·M
3-Row



#210P
Sulcular
G·U·M
2-Row



#300P
Right Kind
Sub-G
Brush



#206P
Bridge
and Clasp
Brush



#201P
Denture
Brush



#600P
Metal
Stimulator
Handle



#610P
Proxabrush

Butler

Send for your free Toothbrush Selector Chart,
RX pads, professional catalog and price list.

IN CANADA: 6426 NOTRE DAME ST. W., MONTREAL, P.Q. H4C 1V4

International Meetings

International Prosthodontic Congress, Las Vegas Hilton Hotel, Las Vegas, Nevada, October 18-22, 1977. Contact: American Prosthodontic Society, Suite 2108, 919 North Michigan Ave., Chicago, Illinois 60611.

Fédération Dentaire Internationale, 65th Annual World Dental Congress, Toronto, October 22-28, 1977. Contact: FDI/CDA Congress Office, P.O. Box 6423, Terminal A, Toronto, Ontario M5W 1X3.

Winter Medical-Dental Assembly, New Stanley Hotel, Nairobi, Kenya, East Africa, October 28-November 18, 1977. Contact: Dr. Anthony T. Wachna, North American Chairman, 504 Medical Arts Building, Windsor, Ontario N9A 4J9. Phone: (519) 253-9393.

American Institute of Oral Biology, 34th Annual Meeting, Spa Hotel, Palm Springs, California, November 4-8,

1977. Contact: Executive Secretary, P.O. Box 481, South Laguna, California 92677.

French Dental Association, 1977 National Congress, Congress Hall, International Centre in Paris, November 23-26, 1977. Contact: Alain Deyrolle, Secretary General, French Dental Association, 19 bis, rue Legendre, 75017 Paris.

11th International Dental Trade Fair, Bella Center, Copenhagen, Denmark, January 3-5, 1978. Contact: Royal Danish Consulate, 151 Bloor St. West, Suite 310, Toronto, Ontario M5S 1S4.

Yankee Dental Congress, Prudential Center Complex, Boston, Massachusetts, January 13-16, 1978. Contact: Massachusetts Dental Society, 36 Washington St., Wellesley Hills, Massachusetts 02181.

East Coast District Dental Society, Miami Winter Meeting, Fontainebleau

Hotel, Miami Beach, January 15-18, 1978. Contact: Barbara Sims, Executive Director, East Coast District Dental Society, 2 S.E. 13th Street, Miami, Florida 33131.

8th Paulista Convention of Odontology and 10th Latin American Seminar of Odontology, Sao Paulo, Brazil, January 21-28, 1978. Contact: Dr. Edmir Matson, General Secretary, Rua Humaitá 389, Caixa Postal 2523, CEP 01321, Sao Paulo, Brazil.

Australian and New Zealand Societies of Periodontology, Combined Meeting, Melbourne, Australia, February 9-10, 1978. Contact: Dr. Lloyd G. O'Brien, 147 Collins St., Melbourne, Victoria 3000, Australia.

Australian Dental Association, Jubilee Congress, Melbourne, February 12-16, 1978. Contact: Dr. D. Behrend, Honorary Secretary, 1978 Jubilee Dental Congress, P.O. Box 29, Parkville, Victoria 3052, Australia.

KARIDIUM



**For the individual
systemic control
of dental caries**

Literature, dosage sheet on request.

PROFESSIONAL PHARMACEUTICAL CORP.
2795 BATES ROAD, MONTREAL 251, QUEBEC • (514) 739-3633

**IMPACT,
RESPONSE,
RESULTS**
when you advertise in
The Journal of
The Canadian Dental
Association

PRIME EXPOSURE FOR
YOUR ADVERTISING

HIGHEST CIRCULATION
FIGURES IN CANADA

UNIQUE, WELL-PLANNED
EDITORIAL PROGRAM

EVERY ISSUE BILINGUAL

TOP QUALITY REPRODUCTION

COMPETITIVE RATES



Contact Business Manager:
JOURNAL OF THE CANADIAN
DENTAL ASSOCIATION
1815 Alta Vista Drive, Ottawa
Ontario K1G 3Y6
Telephone: (613) 523-1770

new **Aim**[®] toothpaste

The fluoride toothpaste with the taste children prefer



Child-tested and proven for its superior taste

1300 children tested the taste of new Aim Toothpaste against the taste of the two leading fluoride brands. Result: Children preferred Aim 2 to 1 over those brands. They find its minty flavour truly delicious and they love its clear blue-green color and smooth texture.

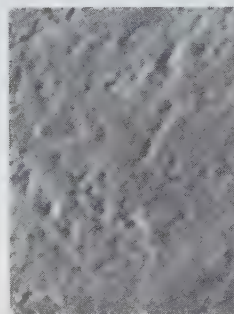
Significance: With taste so superior, your young patients will hardly need coaxing about brushing. And by brushing regularly, they'll get the anti-cavity ingredient they need — regularly.

Proven for its fluoride ion availability

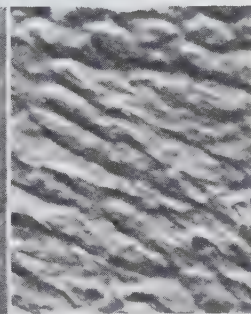
New Aim contains the established concentration of 0.4% stannous fluoride — an anti-cavity ingredient time-proven for its effectiveness as an aid in reducing the incidence of cavities. Aim also has a silica gel base, assuring that the fluoride ion availability is maintained during normal shelf life. In fact, laboratory tests show that the fluoride ion concentration in Aim is readily available for incorporation into tooth structure.

Proven for its gentleness to dentin and enamel

Aim's silica aerogel/xerogel abrasive system* aids in the removal of plaque, pellicle, food particles and stains — with notable gentleness to enamel and dentin. Significance: Aim cleans patients' teeth safely — the way you want them to be.



Surface of normal tooth enamel (2000x) — treated with Aim (exposed section of polished enamel surface, immersed for 15 minutes in a 25% aqueous slurry of Aim followed by a thorough rinsing) — then etched with 0.1N lactic acid, pH 4.5 for 10 minutes. Enamel surface shows minimal etching.



Surface of normal tooth enamel (2000x) — sectioned and polished but left untreated — etched with 0.1N lactic acid, pH 4.5 for 10 minutes. Enamel surface shows extensive etching.

RECOMMEND AIM WITH CONFIDENCE...



a product of:
LEVER DETERGENTS LIMITED
Toronto, Ontario M4M 1B6

*Canadian Patents #835353; #914069

EDITORIAL

DO YOU NEED A REMINDER?

October is once again CFDE Month!

The significance of identifying a particular month in this way is to provide a regular time frame during which information about the activities of the Canadian Fund for Dental Education can be concentrated. It provides a set time each year for the Fund's trustees to report to the Fund's supporters and to issue reminders of the continuing need for financial support from as many of the profession's friends as possible.

research by assisting seventeen dentists and six dental hygienists to prepare for teaching careers in Canada. It will again finance the annual dental students' conference and the student table clinic program. It is supporting a research project aimed at providing improved dental treatment for children. It will defray a portion of the costs of bringing a world renowned dental pathologist from Bulgaria to participate in the scientific program at the World Dental Congress to be held in Toronto in October under the sponsorship of the Canadian Dental Association. Funding for teaching and dental health conferences, graduate and undergraduate accreditation programs, grants to each dental school, a grant for the 3rd International Congress on Cleft Palate recently held in Toronto, are other examples of how your contributions help to constantly improve dental health care.

The funds which allow CFDE to financially support such projects come from a variety of sources, including dentists, dental auxiliary groups, the dental trade, dental organizations, foundations and other friends who are interested in helping dentistry improve its services to the public. All con-

tributions are gratefully acknowledged by listing the donors in the pages of the Fund's annual report which is inserted in the Journal of the Canadian Dental Association.

The activities which the Fund supports are all selected through careful scrutiny by the trustees. Each year they are chosen for assistance from an ever increasing list of worthy applications. Priorities have to be established because the requests far exceed the monies available. This is a most difficult task. The trustees and the members of their Advisory Committee on Fellowship Selection deserve our sincere commendation for the care and diligence with which they undertake this difficult and thankless assignment.

While the nature of the projects supported by the Fund is varied, "dentistry" is always the winner. In one way or another, the projects are all aimed at improving the profession's educational and research potential — unquestioned benefits to those now providing dental services, to those who will in future provide dental services and certainly to those who will receive these services.

I am confident that you, the readers, will not need a reminder that October is CFDE Month or that the Fund cannot serve its altruistic purposes without your help. You will, I am sure, need no reminder that your gifts to the Fund are tax deductible and that you are also directly or indirectly the beneficiary of your own gifts. But if you do — this is it!!!

W. G. McIntosh, DDS

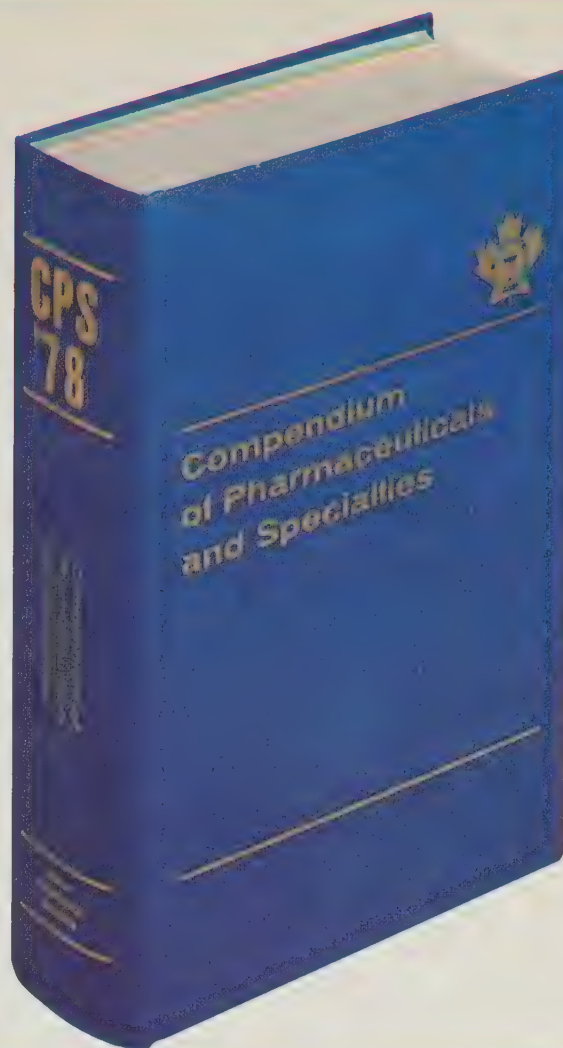
Updated and revised

CPS'78

Compendium of Pharmaceuticals and Specialties Thirteenth Edition

CPS'78, revised and updated by independent writers, briefly and accurately describes pharmaceutical products generally available for human use in comprehensive monographs

- Updated Products Monographs
both Brands and Generics
- New Product Recognition Charts
revised, expanded, colour-keyed
- Comparative Vitamin Charts
- Therapeutic Index
- Brand/Generic Name Index
- Manufacturers' Index
- Metric Conversion Tables
- Poison Control Centres (Canada)
- Federal Drug Schedules (Canada)



Available: English - late December, 1977
French - late February, 1978

Canadian Pharmaceutical Association
75 College Street, Toronto, Ontario M5T 1P8

Pre-publication
price

Regular price \$27.00
after November 15, 1977

\$23.00

Regular price after November 15, 1977

- Please supply _____ copies of CPS'78
- | | |
|---|----------|
| Single copy price @ \$27.00 | \$ _____ |
| 10 copies or more @ \$24.00 each | \$ _____ |
| 50 copies or more @ \$23.00 each | \$ _____ |
| Sub-Total | \$ _____ |
| Less \$1.00 per copy for payment with order | \$ _____ |
| Total | \$ _____ |

Payment enclosed (save \$1.00 per copy)

Please invoice me

☐ ENGLISH ☐ FRANÇAIS

Please print

PH # _____

Name _____

Address _____

Postal Code _____

Occupation _____

Telephone _____

Purchase Order No. _____

Pre-publication Order Form

Valid to November 15, 1977

- ☐ I enclose payment in full. Please enter my order for _____
copies of CPS'78 and deliver prepaid as soon as available.
- | | |
|---|----------|
| ☐ Single copy price @ \$23.00 | \$ _____ |
| ☐ 10 copies or more @ \$21.00 each | \$ _____ |
| ☐ 50 copies or more @ \$20.00 each | \$ _____ |
| Total | \$ _____ |

Note: Payment **must** accompany order and before November 15, 1977.

☐ ENGLISH ☐ FRANÇAIS

Please print

PH # _____

Name _____

Address _____

Postal Code _____

Occupation _____

Telephone _____

Purchase Order No. _____

469

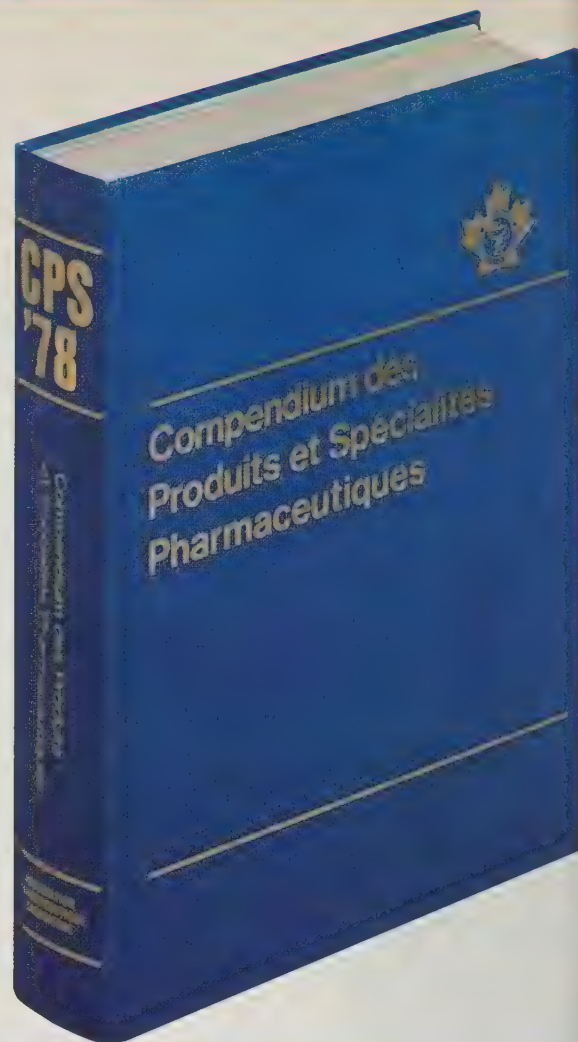
mis à jour et revu

CPS'78

Compendium des Produits et Spécialités Pharmaceutiques, treizième édition

CPS'78, revu et mis à jour par des auteurs indépendants, décrit clairement et brièvement les produits pharmaceutiques, qui sont généralement disponibles au Canada en vue de leur usage chez l'homme, par des monographies détaillées—

- ☐ Mise à jour des monographies des produits—
dénominations communes et noms déposés
- ☐ Nouveaux tableaux de reconnaissance des
produits revus, amplifiés, avec code de couleur
- ☐ Tableaux vitaminiques comparatifs
- ☐ Index thérapeutique
- ☐ Index des noms déposés/dénominations
communes
- ☐ Index des fabricants
- ☐ Tables de conversion métrique
- ☐ Centres anti-poison (Canada)
- ☐ Annexes fédéraux des médicaments (Canada)



Disponible: Français - à la fin de février 1978
Anglais - à la fin de décembre 1977

Association Pharmaceutique Canadienne
175 College Street, Toronto, Ontario M5T 1P8

Prix de
pré-publication

Prix régulier: \$27.00
après le 15 novembre 1977

\$23.00

Prix régulier après le 15 novembre 1977

- ☐ Veuillez m'envoyer _____ exemplaires du CPS'78
- ☐ Prix pour 1 exemplaire @ \$27.00 \$ _____
- ☐ 10 exemplaires ou plus @ \$24.00 ch. \$ _____
- ☐ 50 exemplaires ou plus @ \$23.00 ch. \$ _____
- Sous-Total \$ _____
- ☐ Moins \$1.00 l'exemplaire pour paiement
accompagnant la commande \$ _____
- Total \$ _____
- ☐ Paiement inclus
(économisez \$1.00 l'exemplaire)
- ☐ Veuillez me facturer
- ☐ FRANÇAIS ☐ ANGLAIS

En lettres moulées

PH # _____

Nom _____

Adresse _____

Code postal _____

Profession _____

Téléphone _____

Formule de commande N° _____

Formule de commande pré-publication

En vigueur jusqu'au 15 novembre 1977 *seulement*.

- ☐ Paiement complet inclus. Veuillez enregistrer ma commande
pour _____ exemplaires du CPS'78 et m'expédier le
tout franco dès la parution.
- ☐ Prix pour 1 exemplaire @ \$23.00 \$ _____
- ☐ 10 exemplaires ou plus @ \$21.00 ch. \$ _____
- ☐ 50 exemplaires ou plus @ \$20.00 ch. \$ _____

A noter: Le paiement *doit* accompagner la commande et nous
parvenir avant le 15 novembre 1977.

☐ FRANÇAIS ☐ ANGLAIS

En lettres moulées

PH # _____

Nom _____

Adresse _____

Code postal _____

Profession _____

Téléphone _____

Formule de commande N° _____

EDITORIAL

A TITRE DE RAPPEL!

Encore une fois, octobre, le mois du FCED!

L'identification d'un mois spécial a pour but de créer un cadre chronologique au cours duquel l'on peut concentrer toute l'information s'appliquant aux activités du Fonds canadien pour l'enseignement dentaire. Elle procure également aux fiduciaires du Fonds l'occasion de faire leur rapport aux donateurs et de formuler un rappel en ce qui concerne le besoin incessant d'appui financier provenant de tous les amis possibles de la profession dentaire.

Pour 1977, le Fonds continue à promouvoir l'enseignement et la recherche dentaires grâce à des bourses qu'il accorde à dix-sept dentistes et à six hygiénistes dentaires, en vue de les préparer à une carrière d'enseignement au Canada. Une fois de plus, le FCED finance la conférence dentaire annuelle des étudiants et la table clinique des étudiants; il subventionne également un projet de recherches destiné à améliorer les soins dentaires apportés aux enfants. Le Fonds prend également à sa charge une partie des frais occasionnés par la visite d'un pathologiste bulgare de renommée mondiale: ce dernier participera au programme scientifique du Congrès dentaire mondial qui aura lieu à Toronto sous l'égide de l'Association dentaire canadienne. Financement de programmes d'enseignement et de congrès du domaine de la santé dentaire, programmes d'accréditation pré et post-universitaires, subventions accordées à toutes les écoles de médecine dentaire, une subvention accordée au 3ème congrès international sur les fissures palatines dernièrement tenu à Toronto, voici quelques exemples de la manière dont votre contribution aide à constamment perfectionner la santé dentaire.

Les fonds qui permettent au FCED de subventionner des projets de ce genre proviennent de nombreuses sources, y compris les dentistes, les groupes d'auxiliaires dentaires,

l'industrie dentaire, les organismes dentaires, les fondations et divers autres amis qui désirent aider la profession à améliorer la qualité des soins qu'elle fournit au public. Le Fonds exprime sa gratitude au moyen d'une liste des noms des donateurs publiée au rapport annuel du Fonds, lequel est inséré dans le Journal de l'Association dentaire canadienne.

Les activités subventionnées par le Fonds sont choisies à la suite de l'étude minutieuse par les fiduciaires d'une liste toujours croissante de demandes, toutes méritoires. Ils doivent établir des priorités car les demandes excèdent de loin les fonds disponibles. Il s'agit-là d'une tâche extrêmement difficile. Les fiduciaires et les membres de leur Comité consultatif sur la sélection des boursiers méritent nos éloges les plus sincères pour l'assiduité et le zèle qu'ils apportent à une tâche aussi pénible qu'ingrate.

Bien que la nature des projets financés par le FCED soit variée, "Médecine dentaire" est toujours la priorité. D'une manière ou de l'autre, les projets sont tous destinés à accroître le potentiel éducatif et de recherches de la profession — au profit incontesté de ceux qui fournissent les services dentaires aujourd'hui, qui les fourniront demain, et de toute évidence des bénéficiaires de ces services.

Je suis persuadé que vous, le lecteur, n'oublierez pas qu'octobre est le mois du FCED et que le Fonds ne peut poursuivre son œuvre humanitaire que grâce à votre aide. Inutile de vous rappeler que vos dons sont déductibles aux fins d'impôts. Et inutile d'ajouter que directement ou indirectement, vous êtes vous-même le bénéficiaire de votre propre don. C'est pourquoi nous nous permettons d'insister!!!

W. G. McIntosh, DDS

WORLD NEW!

Type I — for Cementation & Lining —



1. Cementation of crown and bridge



2. Cementation of orthodontic bands



3-1. Before preparation



3-2. Lining with Fuji Ionomer Type I



3-3. Restoration with G-C's Epolite 100



GC Fuji Ionomer

- Excellent in translucency and accordant well to tooth.
- Minimum pulp and tissue irritation.
- Good adhesion to dentin, enamel and metals.
- High strength and outstanding durability in a patient mouth.
- Outstanding marginal sealing property.
- Excellent in surface smoothness, minimum staining and color change.
- Less heat generation and convenient setting time(5-6 min.)

Type II — for Restorative Filling —

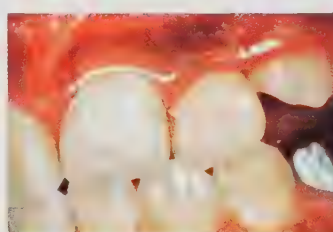


TORONTO CANADA

Booth Nos. 206, 208, 210



1-1. Patient: Age 10 female



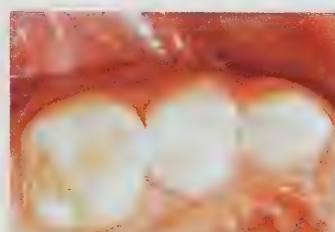
1-2. After cavity preparation



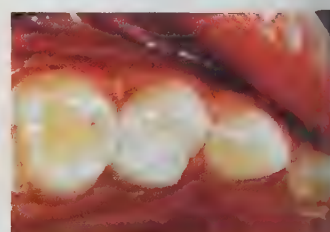
1-3. Restoration with Fuji Ionomer Type II



2-1. After cavity preparation



2-2. Restoration with Fuji Ionomer Type II



2-3. 10 months postoperative

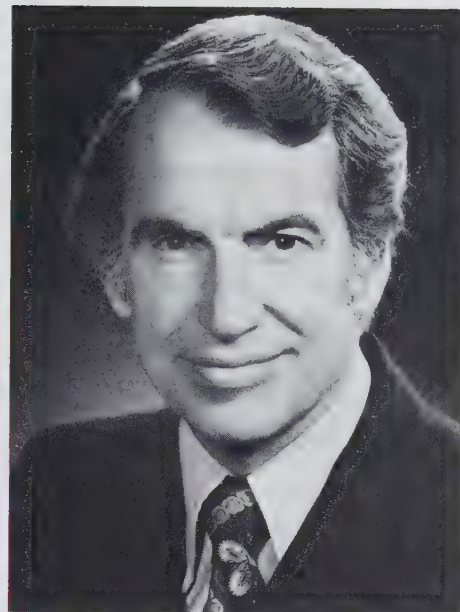


G-C DENTAL INDUSTRIAL CORP.

G-C INTERNATIONAL CORPORATION
2-14 Hongo 3 Chome, Bunkyo-ku, Tokyo, Japan

"SINCE WHAT WE CHOOSE IS WHAT WE ARE . . ."

**Wesley J. Dunn, President,
Association of Canadian Faculties of Dentistry,
L'Association des Facultés Dentaires du Canada,
London, Ont.**



William de Witt Hyde, the author of the well-known hymn, "Creation's Lord", began his fifth verse with the words, 'Since what we choose is what we are'. And just as what a person is depends on the totality of the influences which bear upon him, so too the worth and stature of a profession reflects the sum of the various influences which affect it.

There can be little doubt that one of the most highly significant factors which bears upon societal regard for, or response to, any vocational or professional calling, is the educational preparation of its members. One wonders, at times, if most of us tend to take for granted the present high standards of dental education, an education, the successful completion of which results in an earned university doctorate, with all that that connotes. It was not always so. A reading of Gullett's, *A History of Dentistry in Canada*, cannot but help impress one with the heroic early struggles of the profession to establish educational programs even then in consonance with the modern objectives of biologic orientation, technical competence, and social sensitivity.

All of Canada's ten dental schools conduct their programs as integral components of publicly-supported universities. Perhaps that fact permits the inference, seemingly obviously taken by a majority of the profession, that the financing of dental education, apart from tuition fees, agencies of one kind or another. And there can be little doubt that if the total resources available to the dental schools were derived from tax dollars the schools would not close their doors. But what about the measure of excellence? The evidence is pervasive that as a consequence of the effectively responsible trusteeship of non-restricted funds from philanthropic sources, by far the most important of which, in this country, has been The Canadian Fund for Dental Education, the schools have been able to achieve and maintain standards of dental education which, somewhat immodestly perhaps, we believe are comparable to the best in the world.

If one benefit from the existence of The Fund may be deemed to be greater than all others it can, perhaps, be

found in the provision, over many years, of financial aid to aspiring dental teachers enabling them to complete graduate training appropriate to their career goals. There is no dental school in the country whose academic contributions are not very significantly enhanced as a consequence of the participating involvement of many members of faculty whose entry into dental education would probably not have been gained in the absence of the vital support which The Fund made possible.

What have been other purposes to which CFDE funds have been directed? The list is almost without limit but here are a few:

- The Fund has permitted the initiation of research activities of newly-appointed faculty. It is difficult for new appointees to obtain funds for research at the time their appointments commence. During the interval when they are developing substantial proposals, some schools have employed CFDE funds to assist new faculty to initiate their research activities.
- The Fund has made possible Faculty Workshops, Seminars, or "Think-Ins", occasions when academic staff from all disciplines are able to interact and attempt to develop and articulate goals and priorities and to catalyse new program development.
- The Fund has been widely employed in the partial support of intramural education programs. Most schools have relatively large part-time academic staffs and it is imperative that these competent and interested practitioners be given the opportunity of becoming fully-informed about the educational programs in their respective areas and of becoming acquainted with principles of educational methodology in the institution.
- The Fund has indirectly supported some academic staff in acquiring vitally-important scientific and clinical knowledge and expertise during sabbatical leaves spent in internationally-renowned laboratories and institu-

Continued on page 475

“L’OBJET DE NOTRE CHOIX: CE QUE NOUS SOMMES...”

Wesley J. Dunn, président

L’Association des facultés dentaires du Canada

Association of Canadian Faculties of Dentistry

London, Ont.

William de Witt Hyde, auteur de célèbre cantique “Creation’s Lord” (Seigneur de la Création) commence la cinquième strophe par les mots: “Since what we choose is what we are”. La valeur d’une personne reflète ce que font d’elle les influences qu’elle subit, ainsi que la valeur et la stature d’une profession reflètent les influences qui agissent sur elle.

On ne peut douter que la formation professionnelle est l’un des principaux facteurs qui influe sur la considération et la réaction du public envers toute vocation ou profession. On se demande parfois si la plupart d’entre nous n’ont pas tendance à tenir pour acquis les normes élevées que l’on observe aujourd’hui dans l’enseignement dentaire, enseignement qui aboutit à un doctorat universitaire et tout ce que ce diplôme implique. Il n’en était pas toujours ainsi. La lecture de l’oeuvre de Gullett, *A History of Dentistry in Canada* ne peut qu’impressionner le lecteur qui suit la lutte héroïque de la profession à ses débuts, lutte qui aboutit à la création de programmes éducatifs qui étaient même déjà alors compatibles aux objectifs d’orientation biologique, de compétence technique et de sensibilité sociale d’aujourd’hui.

Les dix écoles dentaires du Canada gèrent leur programme à titre de facultés intégrantes dans le cadre d’universités publiquement financées. Et voilà peut-être pourquoi la majorité de la profession estime que le financement de l’enseignement dentaire, en dehors des frais de scolarité perçus, est entièrement une responsabilité publique et qu’il doit être fait par l’entremise de divers organismes gouvernementaux eux-mêmes soutenus par l’argent provenant des impôts. Et l’on ne peut douter que si la totalité des fonds mis à la disposition des écoles dentaires provenait des dollars/impôts, celles-ci ne fermentaient quand même pas leurs portes. Mais quelle direction prendraient les normes d’excellence? L’évidence est convaincante qu’en conséquence de l’administration efficace de fonds non restrictifs provenant de sources philanthropiques — et au Canada le Fonds canadien pour l’enseignement dentaire constitue la source la plus considérable — les écoles ont pu atteindre et maintenir des normes d’excellence que nous estimons, peut-être avec une certaine prétention, être comparables aux meilleures écoles du monde.

Si un bénéfice unique dérivant du Fonds peut être considéré comme étant plus important que tous les autres, on peut peut-être signaler l’appui financier apporté pendant de nombreuses années aux enseignants désireux de poursuivre des études post-universitaires compatibles avec leurs objectifs professionnels. Il n’existe pas une seule école de médecine dentaire au Canada, dont la contribution n’ait été considérablement rehaussée grâce à la participation de nombreux membres de la faculté, qui n’auraient probablement jamais eu accès au domaine de l’enseignement sans l’appui que leur a apporté le Fonds.

Et vers quels autres objectifs le FCED dirige-t-il son appui? La liste est infinie mais voici quelques-uns de ces objectifs:

- Le Fonds a permis la mise en œuvre de programmes de recherches à diverses nouvelles facultés. Les titulaires de nouveaux postes ont trop souvent de grandes difficultés à obtenir des fonds destinés aux recherches au moment où ils entrent en fonction. Pendant la période d’élaboration d’importantes propositions, certaines écoles ont obtenu du FCED des fonds qui leur permettaient de mettre en œuvre ces programmes.
- Le Fonds a rendu possible l’organisation d’ateliers de faculté, de séminaires ou d’“échange-idées”, réunions au cours desquelles les membres du personnel universitaire de toutes les disciplines peuvent s’assembler pour concevoir et formuler les objectifs et les priorités et organiser les nouveaux programmes.
- Le Fonds a souvent partiellement subventionné des programmes éducatifs intra-muros. Il y a, à la plupart des écoles, un grand nombre d’enseignants qui sont employés à temps partiel et il est essentiel que ces praticiens, compétents et engagés, soient au courant des programmes éducatifs qui existent dans leurs domaines respectifs et qu’ils se familiarisent avec les principes de méthodologie éducative de leur institution.
- Le Fonds aide indirectement certains membres universitaires à acquérir les connaissances et les compétences scientifiques et cliniques essentielles au cours des congés sabbatiques qu’ils passent à des institutions ou laboratoires de renommée mondiale. A leur retour, ces

professeurs exercent une influence considérable non seulement sur leur propre département, mais ils apportent à toute l'école une stimulation considérable.

- Le Fonds s'est également avéré très utile par les bourses à court-terme qu'il octroie aux enseignants dentaires. Grâce à ces bourses, de nombreux enseignants ont été en mesure de participer à des programmes spéciaux — d'été ou autres.
- Le Fonds est aussi très efficace en ce qui concerne l'appui qu'il apporte aux hygiénistes dentaires dans le but de les préparer à des carrières universitaires. Il faudra, à l'avenir, un nombre croissant de professeur pour faire face à l'expansion des programmes pour les auxiliaires.
- Le Fonds aide généreusement le personnel technique, les étudiants en médecine dentaire et rehausse les programmes de recrutement.

En 1977, le Fonds canadien pour l'enseignement dentaire offrira plus de \$160,000 à l'appui de programmes dont bénéficieront praticiens, écoles, enseignants et étudiants, auxiliaires ainsi que le grand public que nous servons tous. Les budgets d'exploitation des écoles de médecine dentaire du Canada s'élèvent à quelque \$16,000,000. Lorsque l'on

pense que la contribution de FCED ne constitue qu'un pour cent de cette somme et à tout ce qui peut être réalisé grâce à elle, il est difficile de ne pas déborder d'enthousiasme à l'idée des résultats que l'on pourrait obtenir si chaque membre de la profession, praticien, enseignant, ou autre offrait au Fonds une contribution équitable à titre d'engagement personnel ou professionnel, car le FCED, tout en ayant déjà fait une contribution sans égal à la profession, a néanmoins un potentiel inexploité lorsqu'il s'agit de l'avancement de la dentisterie et de l'enseignement dentaire.

La conclusion de l'hymne de William Hyde? Nous pouvons peut-être tous en tirer un message:

*"L'objet de notre choix: ce que nous sommes
L'objet de notre amour: ce que nous serons,
Notre but, il brille au loin,
Et la volonté de l'acquérir
Nous offre la liberté."*

*"Since what we choose is what we are,
And what we love we yet shall be,
The goal may ever shine afar,
The will to win makes us free."*

"Since what we choose is what we are . . ."

Continued from page 473

tions. Upon return, these colleagues very significantly influence not only their own departments but they stimulate the entire school, as well.

- The Fund, through its short-term fellowship support of dental teachers has been most helpful. Many full-time faculty have been enabled to undertake special summer programs and the like with this assistance.
- The Fund has been most productive in helping to support Dental Hygienists preparing for academic careers. As new auxiliary programs are initiated there will be an increasing need for dental auxiliary teachers.
- The Fund's generosity has benefited technical staff and dental students, and has enhanced recruitment programs.

In 1977, The Canadian Fund for Dental Education will provide over \$160,000 in aid of programs that will benefit practising dentists, dental schools, dental teachers and students, dental auxiliaries, and the public which all of us

serve. The operating budgets of Canada's dental schools probably approximate \$16,000,000. When one thinks of what only one per cent of that total, the amount of this year's CDFE aid, can accomplish, it is difficult to contain one's enthusiasm for the results which could accrue if each member of the profession, whether he or she be a practitioner, educator, or involved in other areas of professional interest, would assume, as a personal and professional obligation, reasonable support for The Fund which has already made magnificent contributions but which has nevertheless, such untapped potential for the advancement of dentistry and dental education.

Well how did William Hyde conclude his hymn? Perhaps there is a message in it for all of us:

*"Since what we choose is what we are,
And what we love we yet shall be,
The goal may ever shine afar, —
The will to win it makes us free."*

Dentsply presents the Classic™ Dental Stool.



The color shown is Bittersweet, all vinyl.

It was designed to be nothing less than indispensable to your comfort and health.

And if this seems like a strong statement, please read this.

The Dentsply CLASSIC™ Stool is a whole revolution in seating comfort.

(A) Underneath the beautiful upholstery of the CLASSIC Stool are three layers of a new foam material called *Sensa*™. *Sensa* Foam was developed for NASA as cushioning for space vehicle seats.

Sensa Foam not only is pressure sensitive but also *temperature sensitive*. The heat from your body causes the material to *actually flow*—much like impression material—in conformity with your individual body contours. This relieves the pressure at the bony ischial and sacral areas and redistributes it more evenly over the entire posterior and thighs. It's like floating. And it reduces the build up of "numb" pressure points that cause you to shift while operating—and, even though subconsciously, distract you from your best work.



(B) This photograph illustrates how the *Sensa* cushion creates what we call a "natural saddle"™ seat. As the model raises up, the contour impression of his buttocks and thighs is clearly visible in the comfortably wide seat—dramatic proof that *Sensa* Foam *conforms and supports* as claimed. You get the support of a saddle seat precisely molded to your shape. And you never have to rotate the



seat to any particular position. You form a new, perfect, *natural saddle*™ each time you sit down. Seconds after you leave the cushion *Sensa* Foam returns to its original state.



The Dentsply back-abdomen-arm support treats your body as lovingly as *Sensa* Foam treats your seat. The support rotates freely a full 360 degrees around the seat to provide contoured, cushioned support wherever you need it. The unique, patented parallelogram movement adjusts to every body position and gives you full support no matter how you sit or work. Vertical adjustment accommodates the extra long or extra short torso.



swift and gentle. The lift control ring goes 360 degrees around the stool under the seat so that it can be reached easily with either hand and from any angle. To go up, raise your seat slightly; to go down you just sit tight. When you release the control ring you and the seat are locked at the desired height.

A low low, a high high. With adjustments the seat goes from a low low of 16½" to a high high of 25½", so it works equally well for the not so tall dentist and the very tall dentist.

Five legs instead of four. You and your assistant will appreciate the added stability and feeling of security.

New caster design. Not just one roller, but two, so the casters can turn easily without twisting for better mobility on tile or carpet.

Protective bumpers. The five legs of the CLASSIC Stool have bumpers to protect you and your office furniture.

The body support is activated by a flush mounted finger touch control. Simply squeeze, adjust and release—it locks exactly where you want it.



Going up or down in the CLASSIC Stool is smooth,



The CLASSIC Stool is available in the ten fabric/vinyl color combinations of the Dentsply CLASSIC® Chair and in ten popular U.S. Royal Naugahyde® colors. All upholstery materials are flame resistant.

Spend just twenty minutes' with the CLASSIC Dental Stool. Your dealer has it now.

DENTSPLY Equipment

 Dentsply International, York, PA 17405

CANADIAN DENTAL ASSOCIATION ANNOUNCES NEW NATIONAL/PROVINCIAL INSURANCE PROGRAM

Lower premiums, improved coverage and simplified procedures will be among the major features of the new CDA National/ Provincial Insurance Program to be made available to Canadian dentists over the next few weeks.

Canadian Dental Service Plans, Inc., which administers the program for CDA, has announced the following developments:

1. Premiums for most forms of insurance have been reduced.
2. Higher insurance coverage will be available.
3. More favourable policy provisions — such as an improved definition of dismemberment and increased compensation for loss of use of a thumb or index finger — have been introduced to meet the specific needs of dentists.
4. There will be no direct sales calls by agents or brokers.
5. Streamlined administrative procedures will be introduced. For example, a single premium statement

defining all details of coverage will be issued. Participants will be able to pay for all their insurance needs quarterly or annually.

A major information program is now being launched by CDA and provincial associations to make sure all dentists are fully informed in time to take advantage of the improvements. This will include a series of explanatory meetings across Canada in November when dentists will be able to have individual questions answered.

In addition, information, advice and claims assistance will be available across Canada.

Creation of the new program has involved months of research and discussion within the profession by national and provincial associations and the CDA insurance council in order to develop plans which meet the specific requirements of dentists. After final development of the plans, competitive quotations on rates were obtained from 49 insurance companies. Carriers were

then selected, based on the best rates and policy features.

The new program will provide protection in the following areas:

1. Life Insurance, to provide funds for dependents in the event of death.
2. Disability Insurance, to provide an income for living expenses and office overhead when a dentist is unable to work because of illness or injury.
3. Property and Earnings Insurance, to protect a dentist from interruption of earnings or loss of equipment or furnishings in case of damage to an office or its contents.
4. Liability and Malpractice Insurance, if a dentist is held liable for injury to other persons or property.

Dentists will be asked to pay close attention to mailed announcements about the program over the next few weeks. This is because action will be required by individual dentists on some forms of insurance in order to maintain coverage after January 1, 1978.

CDA FORMALLY APPEALS GOVERNMENT RULING

The Canadian Dental Association has formally appealed the Federal Government's ruling to maintain tariff duties on dental lights. CDA contends that dental lights are diagnostic instruments and, as such, should not be subject to tariff duties.

In a brief sent to the Director of the Customs Tariff Division, Revenue Canada, CDA outlined its stand as follows:

"The diagnosis of dental disease in the mouth is carried out by means of

visual examination of all visible surfaces of the teeth, utilizing a mouth mirror and an explorer. For this purpose, light, properly color corrected, and delivered in an intensity and pattern that will adequately illuminate the teeth is an essential part of the dentist's diagnostic instrument assembly.

"Without the light, it would be impossible to detect the discolorations and crevices that indicate dental decay is present. Oral lesions, frequently one

of the earliest signs of cancer, would also go unnoticed.

"Together with the x-ray, the explorer, mirror and light form the diagnostic armamentarium of the dentist, and for that reason the Canadian Dental Association respectfully requests that the Customs and Excise Division reconsider the design and application of the dentist's examining/operating light in the context of its use as a diagnostic instrument."



Caulk
Jeltrate[®]
- get it right
the first time.

479

For more
information
check number 101

No wasted chair time. No costly makeovers. Caulk Jeltrate Alginate Impression Material gives you an accurate impression the *first* time.

Jeltrate has the proper flow to register every oral detail. So appliances fit into place with unerring accuracy, even in the most complicated cases.

Available in three consistencies—Regular, Fast Set, Heavy Body. But the mix *always* works up the same. Smooth. Creamy. Never runny. Never stiff. Batch after batch after batch.

Caulk Jeltrate . . . nice material to work with . . . dependable.

Caulk[®] making life
a little easier
for dentists
Division of Dentsply International Inc.



Federal Sales Tax removed from Articulators

Following many months of negotiations with representatives of the Federal Government, the Canadian Dental Association has announced the removal of the Federal Sales Tax from articulators and all equipment used in the production of artificial teeth, dental partials and bridgework.

Under the new ruling, dentists have been reclassified from "small manufacturers" to "manufacturers".

Examinations: Royal College of Dentists of Canada

Part I (Basic Sciences) Examinations, leading to Fellowship in the Royal College of Dentists of Canada will be held on Monday, June 19, 1978, in regional centres across Canada.

Applications for these examinations, with the \$100.00 examination fee, must be received at The Royal College office by January 15, 1978.

Application forms (for the Part I examinations) and further information may be obtained from the Secretary-Registrar-Treasurer, Dr. John E. Speck, Ste. 614, 170 St. George Street, Toronto, Ontario, M5R 2M8.

Part II (oral) examinations will be held as usual, in Toronto, late in November or early in December, 1978.

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association Retirement Savings Plan stood as follows on August 31, 1977:

<i>Common Stock Fund</i>	\$28.075
<i>Fixed Income Fund</i>	\$19.978
<i>Guaranteed Fund</i>	\$13.919

Total assets (market value) of the plan were \$25,956,365.34.

For further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ontario M5R 2P2.

DENTISTS ACROSS P.E.I. TO BE INVOLVED IN CHILDREN'S DENTAL CARE PROGRAM

Prince Edward Island Health Minister Catherine Callbeck recently announced that the Provincial Government and the P.E.I. Dental Association have reached an agreement that will gradually involve dentists across the Island in the Children's Dental Care Program.

"Up to this point, the children's dental care program has operated with mobile clinics and with the help of a few private dentists in rural areas. The revised program which comes into effect on September 1 will phase in the assistance of nearly all private dentists, to assist the mobile clinics in keeping up with the expansion of the program," she explained.

"Approximately 2000 additional children become eligible each year. The idea is to gradually divert this number of children from the clinics to private dentists at a rate which will still keep the clinics running at full capacity," Miss Callbeck said.

Under the revised program, eligible children who have been receiving all of their dental treatment from participating private dentists will immediately be covered by the program. There are approximately 1000 such children.

While public health dental clinics will continue to operate as usual, a limited number of children who would normally attend these clinics may now have their dental treatment provided by their family dentists.

During the first year or so of the revised program it may not be possible for all parents to attend the dentist of their choice. This will depend on the number of parents wishing to transfer their children; and on the willingness and ability of individual dentists to accept children under the program.

The children's dental care program will pay the costs of basic dental treatment for children who were born on or after January 1, 1965.

HEALTH MINISTRY GRANT AWARDED TO TWO DENTAL RESEARCHERS

Two University of Western Ontario researchers have been awarded a \$93,783 grant by the Ontario Ministry of Health.

The grant has been awarded to Dr. R.I. Brooke, Chairman of the Department of Oral Medicine of the Faculty of Dentistry and Dr. P.G. Stenn, UWO Department of Psychiatry and Chief of Psychology of University Hospital, for a research project titled "Relaxation Training with Biofeedback for Myofascial Pain Dysfunction Syndrome."

The objective of the research will be to assess the efficacy of various treatments for myofascial pain dysfunction syndrome, which Dr. Brooke describes as a "painful stiffening of the jaw joint associated with clicking or popping sounds."

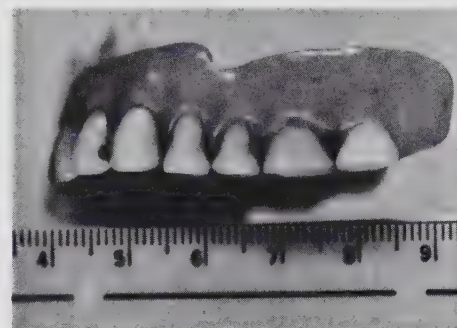
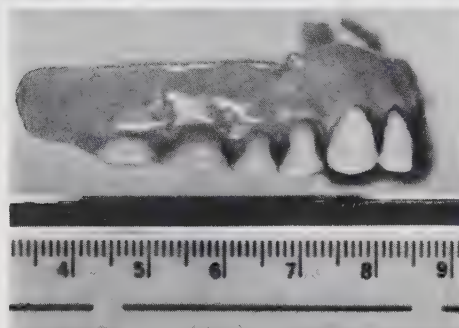
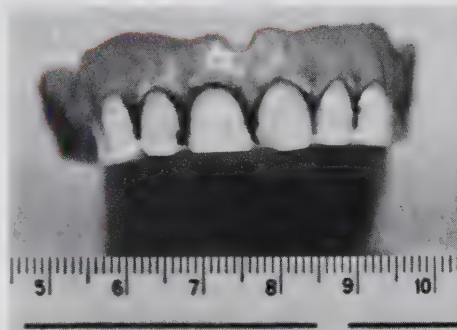
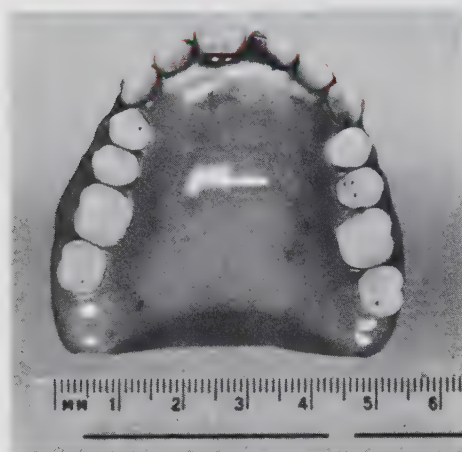
According to Dr. Brooke, the condition is common in those 15 to 25 years of age and its incidence has increased over the past 30 years. About 80 per cent of the reported cases involve women, he added.

The research will also attempt to show that selected dental assistants can be trained to use Biofeedback for the treatment of these patients. Biofeedback is a method of muscle relaxation and tension reduction, Dr. Brooke said.

If this project is successful, the time and cost of treatment may be reduced.

Dr. Brooke has been interested in problems of the temporomandibular joint for the past 10 years and has written extensively on the subject. Dr. Stenn has a special interest in relaxation training and has used Biofeedback for the treatment of many other conditions.

POLICE SEEK ASSISTANCE



On August 31, 1977, at approximately 1745 hours, a woman walked across Highway 401 eastbound lanes from south to north at Leslie Street in the Borough of North York, Toronto, and was struck and killed by a passing eastbound car. She has not yet been identified.

The victim is described as a Caucasian female, age 50 to 60 years, 5'3" in height, 103 lbs., blue eyes, greying hair worn neck length and pulled back. She looked European and wore complete upper dentures. The lowers were not found.

The upper denture was of an acrylic

material with porcelain teeth, NEW HUE MOULD 45S. The teeth were heavily worn occlusally suggesting they have been in service for some time and undoubtedly were opposed by a complete lower denture. No palatal rugae were present on the denture and evidence of careful muscle trimming was present.

The Ontario Provincial Police requests the assistance of dentists across Canada in the identification of this woman. Any information should be addressed to Constable P. D. Junop, Ontario Provincial Police, Downsview Detachment, Box 327, Downsview, Ontario M3M 3A6. Telephone: (416) 248-3151.

CRANIOFACIAL REMODELLING

The recent finding that the upper jaw does not completely unite with the frontal bone of the skull until people are over 70 years of age makes it possible to treat adult patients who have protrusion of the maxilla and other related disfigurements.

Vincent G. Kokich, DDS, and Benjamin C. Moffett, PhD., who received National Institute of Dental Research support at the University of Washington, Seattle, studied 61 skulls of humans aged 20 to 95 years, concentrat-

ing on the frontozygomatic sutures which lie on each side of the face where the zygomaxillary portion of the upper jaw meets the frontal bone of the skull. They examined the suture on one side by X-rays and close inspection. They compared the other side histologically, using a microscope to study stained sections of the tissues.

The investigators found that instead of fusing between the 18th and 35th years as expected, these bones did not unit until after age 70, and then only partially.

New executive for Montreal Dental Club

The 1977-78 executive of the Montreal Dental Club constitutes the following members: L. E. Kent, president; R. Nadeau, first vice president; D. Townsend, second vice president; D. Keppron, immediate past president; W. Gussow, secretary; R. David, treasurer; D. Taylor, fall clinic chairman; P. E. Belisle, N and R Committee chairman; G. Johnston, historian and archivist. Directors are: P. E. Belisle, R. Kadowaki, B. Nyeste, J. M. Little, E. H. Rathlow and J. Taylor.

236 fifth avenue, new york, n.y., 10001

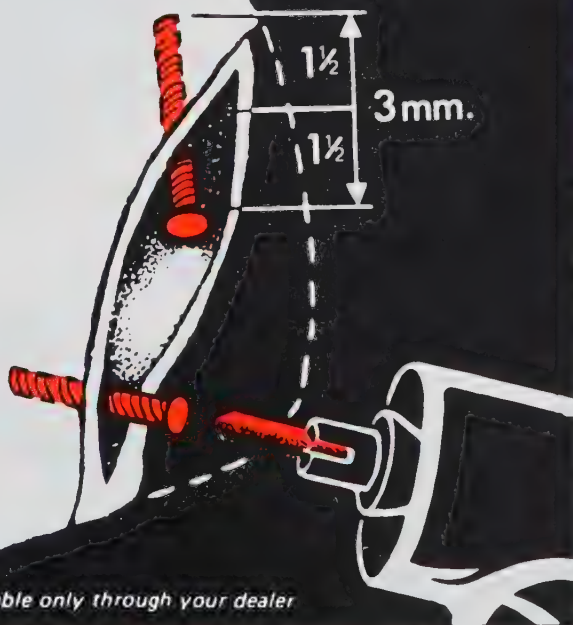
WHALEDENT International
Division of IPCO Hospital Supply Corp

TMS*

MINIKIN

T.M.S. MINIKIN FEATURES:

Minikin Self Shearing at 3mm.
Miniature Button Head for Retention

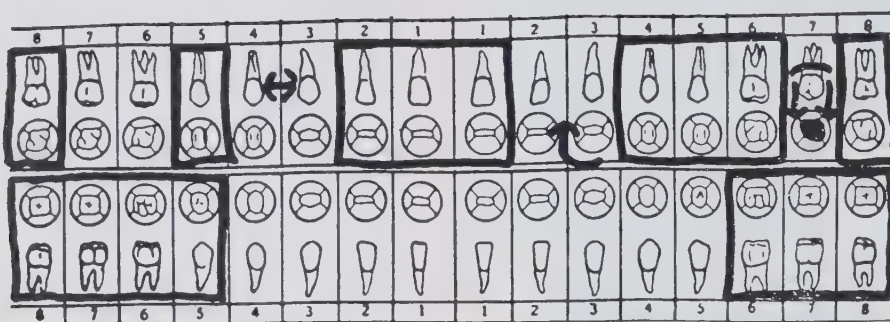


Available only through your dealer

WE
HAVE
COME
UP
TO
YOUR
FINEST
MINIKIN
NEEDS

*
REGD. T.M.

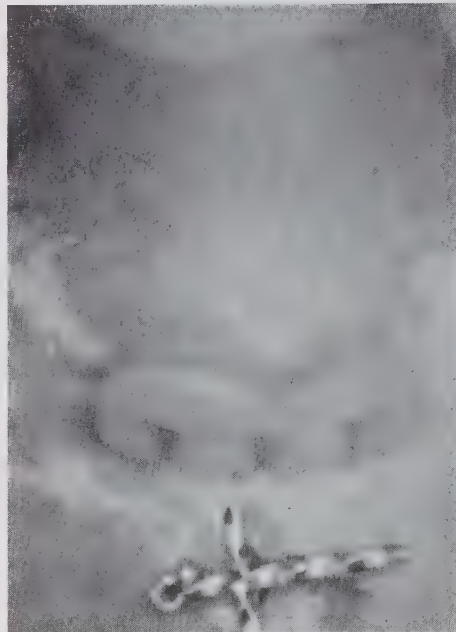
POLICE SEEK ASSISTANCE IN IDENTIFYING BODY



On June 16, 1977, the body of a man was recovered from the Canadian Niagara Power House above the Canadian Falls. The deceased is described as a white male, 5'8" in height, 200 to 210 lbs., apparent age 45 to 55 years with greying black hair.



Partial denture removed from upper arch. Crucifix found in the lower right posterior of the mouth.



Under view of the partial denture removed from the upper arch and the view of the opposite side of the crucifix.

The Niagara Parks Police requests the assistance of dentists across Canada in the identification of this man. Dr. George E. Burgman of Niagara Falls conducted the examination of the victim's dental work and notes the following findings (International Code System): #13 and 14, spaced; #23, rotated; #27, exfoliated slightly, occlusal amalgam; partial — upper acrylic, no clasps; four upper incisors on the partial replace only three missing teeth; partial has a #22 on it but the natural #22 is in place; tooth #24 on the partial is shaped the same as a #23.

Any information or enquiries should be addressed to W.J. Derbyshire, Chief of Police, The Niagara Falls Police, P.O. Box 150, Niagara Falls, Ontario L2E 6T2. Telephone: (416) 358-1338.

Ground floor of CDA Headquarters now rented

Over 6,000 square feet of ground floor space in the Ottawa headquarters of the Canadian Dental Association has now been rented for an annual revenue of approximately \$50,000.

The major tenant, The Ottawa Health Services Centre General Hospital, has rented 3,060 square feet as their project office for the building of their new 50 million dollar hospital.

Other tenants are: the Federation of Medical Women; the Ottawa Dental Society; and, Educational Health Environment Ottawa Ltd. Under the zoning restrictions, CDA can only rent space to related groups in the health care field.

Ontario Society of Oral Surgeons

During a recent meeting of the Ontario Society of Oral Surgeons in Toronto the following executives were elected for the 1977-78 term of office: Gerald Baker, president; George White, president-elect; and, William Prusin, secretary treasurer.

Essex County Dentists

The Essex County Dental Society, Ontario, has announced the names of the members of its executive for 1977-78. They are: W.E. Russell, president; B.E. Walls, vice president; M.P. Piercell, treasurer; and M.H. Malowitz, secretary.

Deaths

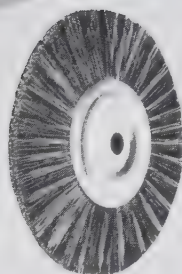
LeBlond, Oscar, 51. Grand Falls, New Brunswick. University of Montreal, 1953. 1-7-77. Survived by Yvette (wife), Charles, Louis and Yves (sons), Louise, Diane and Josette (daughters).

Janzen, William Eldon, 81. Wetaskiwin, Alberta. University of Alberta, 1931. 8-7-77. Survived by Dorothy (wife), and Sandra Lynne (daughter).

Star, Isidore, 54. Montreal, Quebec. McGill University, 1953. 2-77.

Thurston, Gordon Bertram, 79. Edmonton, Alberta. University of Toronto, 1926. 7-77. Survived by Ruth (wife), James and Donald (sons).

Attenboroughs dental brushes



METAL CENTRE BRUSHES

47 mm. Diameter
Soft or stiff black, soft white or grey white, chamois or calbris types all with a stainless steel centre for all fine metal and crown and bridge work.



LONG AND SHORT FINGER PALATE BRUSHES with moulded plastic unbreakable stocks
9 knots of extra stiff bristle or soft grey white hair in a tough plastic stock will reach into even the deepest palate.



THE NEW CALIBRIS BRUSH

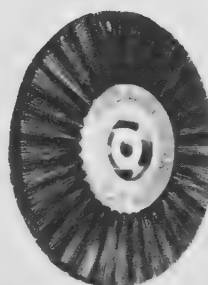
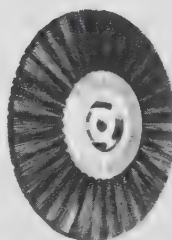
80 mm. Diameter
3 rows of bristle interleaved with 2 rows of calico and incorporating a 3 part injection moulded stock. Thus the calico can be bonded into the stock giving full wear and service.

Pat. No. 883928
Canada 1971



CUP AND WHEEL BRUSHES

Tooth polishing brushes in a variety of sizes: Junior, small and large cup. Small and large wheel. Available in either bristle or nylon with straight or right angle handpiece.



MOULDED PLASTIC CENTRE 2, 3 and 4 ROW BRUSHES

65 mm. 72 mm. 82 mm.
Diameter

Tough and durable plastic centres and the finest bristle or hair combine to make brushes of a superior quality in three different sizes.



C & L E. Attenborough Ltd.

DENTAL MECHANICS & DENTAL BRUSH MANUFACTURERS

VISCOSA HOUSE, GEORGE STREET, NOTTINGHAM NG1 3BN. ENGLAND

TELEGRAMS: LATERAL NOTTINGHAM. TELEPHONE NOTTINGHAM 43562-3

LE CONSEIL EXECUTIF DE L'ADC NOMME UNE NOUVELLE DIRECTRICE DES AFFAIRES ETUDIANTES

Le Conseil exécutif de l'Association dentaire canadienne est heureux d'annoncer la nomination, en vigueur depuis le 1er juin, 1977, de Linda D. Teteruck au poste de directrice des Affaires étudiantes. Mlle Teteruck, qui fait partie du personnel de l'ADC depuis Janvier 1975, était auparavant secrétaire, Bureau des Affaires étudiantes, et administratrice, Programme des tests d'aptitude dentaire.

Mlle Teteruck sera, à l'avenir, responsable des secteurs suivants, tous

compris dans le cadre du Département des affaires étudiantes de l'ADC: administration du programme des tests d'aptitude dentaire pour les étudiants éventuels en médecine dentaire; programme de table clinique pour étudiants de l'ADC; congrès annuel des étudiants canadiens en médecine dentaire; campagne annuelle d'adhésion à l'ADC pour les étudiants; réceptions "Bienvenue à la profession" tenues aux dix facultés dentaires du Canada; et liaison entre les étudiants en médecine

dentaire et l'Association dentaire canadienne.

En 1974, Mlle Teteruck a obtenu sa maîtrise en histoire à l'University of Western Ontario. Avant de se joindre aux rangs de l'ADC, elle était auxiliaire d'enseignement au Département d'histoire à l'University of Western Ontario.

La nouvelle directrice des affaires étudiants travaille au siège social de l'ADC situé au 1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6.

RAPPORT DENTAIRE NUTRITION CANADA

Selon le Rapport dentaire Nutrition Canada, publié dernièrement par Monsieur Marc Lalonde, ministre de la Santé et du bien-être social, l'accent, lorsqu'il s'agit de soins dentaires, doit être placé sur la fluoruration des eaux domestiques ainsi que sur des programmes en nutrition et en éducation publique.

Les principaux résultats de l'enquête sont les suivants:

1. La carie dentaire est la principale cause de la perte de dents pour les personnes âgées de moins de 35 ans. Quatre-vingt seize pour cent des adultes âgés de plus de 19 ans ont souffert de carie.
2. Le pourcentage des enfants âgés de 12 à 14 ans, dont les dents sont en excellente état (c'est-à-dire qu'ils n'ont aucune dent permanente cariée, manquante ou plombée) semble n'avoir aucun rapport avec le groupe économique dont ils font partie.
3. La maladie parodontale est la principale cause de la perte de dents pour

les personnes âgées de plus de 30 ans. Environ quinze pour cent des adultes ont des poches évidentes de maladie parodontaire, trouble qui attaque d'ailleurs plus les hommes que les femmes.

4. Quelque quarante pour cent des adultes âgés de plus de 19 ans n'ont pas de dents dans l'une ou les deux arcades dentaires.
5. Pour les enfants âgés de moins de 11 ans, on a pu observer que la fluoruration a un effet bénéfique constant sur

la réduction de fréquence de la carie.

6. On a également pu observer que trente-neuf pour cent des enfants âgés de 12 à 14 ans souffraient de malocclusion. Treize pour cent de ceux-ci sont des cas graves et un pour cent de cas urgents.

Conclusion du rapport: ce n'est que par la combinaison de soins préventifs et de traitement que l'on pourra faire face avec succès aux besoins dentaires futurs ainsi qu'au considérable arriéré qui existe actuellement.

Mount Royal Dental Society Executif

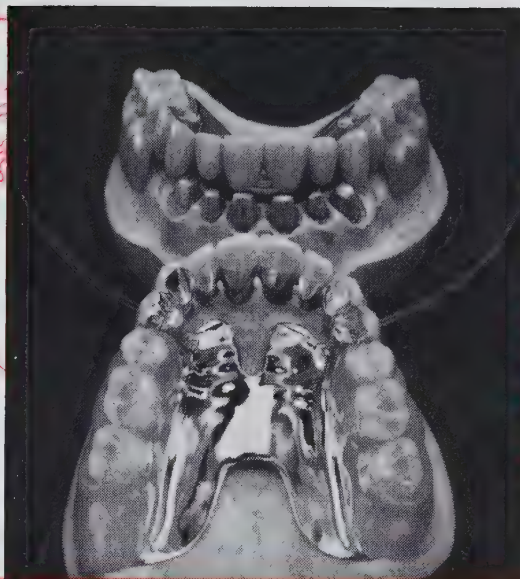
Le Dr Ezra Kleinman vient d'être élu président de la Mount Royal Dental Society et de la Section des diplômés de Montréal de l'Association Alpha Omega; il succède ainsi au Dr Mel Hershenfield.

Quelque 350 dentistes de la région de Montréal font partie de la Mount Royal

Dental Society, laquelle a célébré cette année le 56ème anniversaire de sa fondation.

Les autres membres nommés à l'exécutif étaient les suivants: Drs William Klein, vice-président; Stephen Miller, secrétaire à la correspondance; Richard Topolski, secrétaire-archiviste; et Peter Safran, trésorier.

There's a Nobilium laboratory near you



A MARI USQUE AD MARE: FROM SEA TO SEA



Wherever you practice there is a Nobilium laboratory nearby . . . ready to process your partials with the "aristocrat of chromium alloys" . . . partials that satisfy every patient desire for dependable fit, functional service, oral comfort and lifelike aesthetics. Here is the list of skilled laboratories from British Columbia to Nova Scotia equipped with the latest Nobilium equipment and materials and dedicated to serve your every requirement. Entrust your prescriptions to them with confidence.

ONTARIO — TORONTO

Duracast Dental Laboratories
8 Taber Road, Rexdale

Hirsh Dental Laboratories Limited
495 Adelaide Street West

Modent Dental Laboratory
881 Eglinton Avenue West

Pearce Dental Lab
250 Lawrence Avenue West

**The Posen & Furie
Dental Laboratories Limited**
1366 Bathurst Street

Walter Wood Dental Laboratories
527A Bloor Street West

ONTARIO — HAMILTON

**Allen & Rollaston
Dental Laboratory**
Medical Art Bldg., Hamilton 20

ONTARIO — St. CATHARINES

J. W. Birnie Dental Lab.
206 King Street

ONTARIO — CAMBRIDGE

Achmann Dental Lab.
87 Grand Ave. South

ONTARIO — ORILLIA

Orillia Dental Laboratory
225 West Street North

ONTARIO — OSHAWA

Multi-County Dental Laboratories
172 King Street East

BRITISH COLUMBIA — VANCOUVER

**Northwest Dental Laboratories
Limited**
1070 Homer Street

BRITISH COLUMBIA — VICTORIA

Turner Dental Laboratory
1207 Douglas Avenue, Suite 521

NOVA SCOTIA — AMHERST

**Walter Horton
Dental Laboratories Limited**
31 La Planche Street

ALBERTA — CALGARY

Pro-Dent Lab. Ltd.
6707 Elbow Drive S.W.

Frame Master Lab.
339 - 6th Avenue S.W.

MANITOBA — WINNIPEG

**Associated Crown & Bridge
Laboratory, Limited**
201 - 407 Graham Ave.

Manitoba Dental Labs.
333 Kennedy St.

ALBERTA — EDMONTON

Northwest Dental Laboratory
10540 - 115th Street

Universal Dental Laboratories Ltd.
10066 Jasper Avenue

New-Johnston Dental Labs.
10202 - 102 Street

SASKATCHEWAN — SASKATOON

Ceramic Dental Labs. Ltd.
304 Canada Building

QUEBEC — STE. THERISE

Lafond & Joly Dental Lab.
94 Blainville Street

QUEBEC — GRANBY

Julien-Ste. Jean Dental Lab.
356 Rue Principale

QUEBEC — MONTREAL

Dentarium Laboratories
6997 Victoria Avenue

Nobident Dental Laboratory
3726 Jean-Talon West

Roger Sauve Dental Laboratory
5545 Beaubien Est

QUEBEC — QUEBEC CITY

G. Garneau Dental Lab.
386 Dorchester, Sud

LE JOURNAL — LES DENTISTES

Les dentistes, pour toutes sortes de raisons dont la plus réelle est peut-être l'isolement du bureau, peuvent facilement en venir à juger la réalité scientifique en général, en fonction de son aspect pratique.

Le retour aux sources, ne suppose pas seulement la nécessité de remémorer les enseignements de base de la dentisterie. Il exige davantage car la réalité scientifique va bien au delà de l'aspect pratique. Une véritable charge scientifique n'alimente pas seulement un mode de travail ou une technique nouvelle qu'on choisit d'utiliser ou de refuser d'après des critères établis plus par habitude que par réflexion; au contraire, elle suppose qu'on puisse l'utiliser en fonction et considération de concepts qui prônés par certains ou contredits par d'autres, doivent être néanmoins jugés scientifiquement.

Un humoriste a dit "Tout se prouve, même ce qui est vrai." Les opinions diverses, en dentisterie comme dans toutes les sciences, peuvent toujours servir à jeter des lumières, ce sont les vecteurs de la vérité et de la fécondité scientifique.

La conjugaison des idées et des disciplines dentaires ne sera forcément jamais finale. C'est pourquoi il importe, à partir des premières prémisses, de pouvoir jauger les données nouvelles. C'est d'ailleurs ce qui a rendu nécessaire les changements dans l'enseignement qui, il y a une trentaine d'années, était d'abord orientée prosthodontiquement, alors qu'aujourd'hui l'enseignement des sciences de base est plus poussé et plus susceptible de rendre les gradués aptes à un jugement qui ne soit pas uniquement polarisé par l'aspect pratique des données nouvelles.

Dans cette dimension, le journal doit de plus en plus s'orienter car il n'atteint peut-être pas les sommets nécessaires pour s'imposer comme un panorama prestigieux de la dentisterie cana-

dienne. Il semble que les dentistes canadiens, et plus particulièrement les québécois, n'ont pour le journal qu'un intérêt métigé.

L'Association dentaire canadienne est consciente d'autre part de son rôle de participation à l'éducation continue et elle désire faire une contre-partie française aux publications, surtout américaines, donnant ainsi aux dentistes du Québec, un accès plus facile à l'information.

Une publication mensuelle doit, au départ, faire l'analyse des informations, atteindre les synthèses qui puissent, le plus facilement possible, relier ce qui est su et connu avec les éléments nouveaux de l'information. C'est au niveau personnel que s'opère l'inévitable triage qui constitue, en outre, un moyen de conservation d'un rythme intellectuel, à la pensée que pour apprendre il faut sans cesse voir, regarder, comprendre et... oublier.

L'esprit de synthèse ou d'analyse s'impose avec beaucoup plus d'évidence depuis les dernières décennies alors que des transformations radicales ont bouleversé la vie dentaire.

L'évolution plus rapide du savoir en général, la diffusion plus efficace de l'information, la multiplication des spécialités depuis une trentaine d'années ne sont que quelques raisons qui rendent plus fuyant l'esprit d'analyse et de synthèse. Le journal doit tenir compte des besoins que dépendent de ces situations, sans tomber dans le domaine nettement spécialisé, car le Journal ne doit pas être d'abord destiné aux spécialistes. Il doit surtout viser à faire mesurer et apprécier les pathologies, à faciliter les élaborations des plans de traitements, à choisir les circonstances où le spécialiste doit être consulté.

Il n'est pas paradoxal de demander aux spécialistes de contribuer, par leurs écrits, à l'élaboration des objectifs que nous mentionnons. Bien au contraire,

ils disposent de tous les éléments capables de faciliter la compréhension des situations envisagées par le généraliste. Qui mieux que le spécialiste peut décrire le processus d'une pathologie qui conduit le patient vers lui? Ne serait-ce que pour prévenir les pathologies purement iatrogéniques.

Espérer que tous ceux qui peuvent contribuer à l'éducation continue, telle que décrite au début de cet article, participent effectivement, c'est une utopie.

Cependant, si les praticiens généraux ont comme fonction morale une participation à l'enseignement vis-à-vis leurs patients, il en va peut-être de même pour les spécialistes vis-à-vis les praticiens qui réfèrent.

On ne saurait en effet accepter que le praticien généraliste ne fasse que les traitements sans renseigner son patient sur l'étiologie des problèmes qui auraient pu être prévenus. Or, il existe aussi des problèmes de nature iatrogène et ce sont souventes fois les spécialistes qui, à la fin, sont confrontés avec ces situations. Les généralistes ont peut-être un droit aux renseignements sur les causes des dites situations.

La nature même du travail conduit facilement à l'automatisme clinique du généraliste qui peut trop assurément se fier à l'échelon supérieur. Plus apte à ne voir que l'étiologie de surface, il est plus susceptible de passer outre aux causes systémiques, aux facteurs contributaires des pathologies.

Les facteurs systémiques passent inaperçus, soit par un manque de connaissance adéquate ou une non disponibilité des tests diagnostiques plus à la portée des spécialistes.

Ce sont là quelques raisons qui devraient inciter les spécialistes à participer effectivement à l'élaboration d'une solide section française du Journal de l'A.D.C. C'est une nécessité avant d'être une utopie.

Dr. Robert Lambert

De belles couleurs naturelles de dents
pour la plupart des restaurations.

Le choix de teintes Trubyte Bioform.



Avez-vous réalisé que vous pourriez utiliser votre Guide de Teintes Bioform pour à peu près toutes les restaurations prosthodontiques fixes et amovibles?

N'est-ce pas pratique? ... et si précis en même temps.

N'oubliez pas de prescrire les produits de qualité Dentsply qui ont été fabriqués spécialement pour aller avec votre guide de teintes ...

Les dents **TRUBYTE BIOFORM** en porcelaine et en plastique
pour des prothèses complètes et partielles.

La porcelaine **BIOBOND**® pour les couronnes et ponts.

La porcelaine à l'alumine **TRUBYTE BIOFORM** pour les couronnes.

CAULK® **BIOLON**® pour facettes de plastique.

Si vous ne possédez pas encore l'un des quelque 70,000 mille guides de teintes Trubyte Bioform actuellement utilisés, vous pouvez en obtenir un chez votre distributeur Dentsply.

TRUBYTE®

Dentsply Canada, Ltd. Toronto 2-B, Ontario
Tous droits réservés.

"L'ATTAQUE CARDIAQUE DE CAFE"

Tous les ans, quelque 372 Canadiens s'étouffent en mangeant*. "Auparavant, l'asphyxie provenant de l'inhalation d'aliments était considérée comme étant un problème médical", a déclaré le Dr Donald L. Anderson, professeur de médecine dentaire à l'université de Toronto, qui se spécialise dans ce domaine, "mais aujourd'hui nous la considérons également comme étant un problème dentaire." L'asphyxie, dans ce cas, peut être causée par des dents manquantes, une mastication déficiente ou un dentier réduisant la sensibilité; les drogues et l'alcool contribuent également à ce genre d'accident.

"L'attaque cardiaque de café" est ainsi désignée car la victime d'une telle attaque arrive généralement à prononcer quelques mots, alors que celle qui s'étouffe en mangeant ne peut respirer, tousser ni parler. De plus, ajoute le Dr Anderson, les compagnons de cette silencieuse victime n'ont que cinq minutes pour lui sauver la vie.

On peut s'étouffer en mangeant dans un restaurant très chic, lorsque le vin a

contribué à la gaieté du repas, aussi bien que l'on peut s'étouffer lors d'un "barbecue" dans le jardin, alors que les biftecks sont secs et durs, les couteaux peu efficaces, les assiettes en carton toute molles, et que l'hôte fait preuve de la plus grande sensibilité pour tout ce qui touche à l'excellence de sa gastronomie en plein air.

Le convive, peut-être également sensible, peut soudain avoir dans la bouche, obstruant l'ouverture de la trachée, un morceau de bifteck gros comme une boîte de cigarettes.

Ce genre d'accident peut aussi bien parvenir lorsqu'une femme d'intérieur mange une pomme, lorsqu'un écolier affamé se jette sur son goûter ou lorsqu'un automobiliste en retard avale le toast de son petit déjeuner alors qu'il se précipite au bureau. Même un bébé peut s'étouffer en avalant sa purée, ou encore une personne âgée, surtout si elle est en maison de santé où on la fait manger trop vite. Une récente enquête indique que l'asphyxie due à l'inhalation de produits alimentaires diminue

parmi les bébés mais par contre augmente parmi les personnes de plus de 40 ans.

"Afin de prévenir ces accidents," déclare le Dr Anderson, "il faut prendre l'habitude de bien mâcher et de bien entretenir la dentition".

La méthode Heimlich constitue une procédure très efficace pour sauver la vie à ceux qui s'étouffent. "Voici ce qu'il faut faire", explique le Dr Anderson. "Il faut se mettre debout derrière le patient, lui passer les bras autour de la taille et serrer les deux mains afin de faire un poing. Puis, la tête et le torse de la victime étant inclinés vers l'avant, il faut presser le poing dans son abdomen, juste au-dessus du nombril et su-dessous de la cage thoracique, avec une rapide poussée vers le haut. L'air qui est logé dans les poumons éjectera alors le corps obstructif, tout comme un bouchon qui saute."

*Statistiques Canada, à partir de données recueillies de 1965 à 1974.

L'ETIQUETTE DES BOITES DE CEREALE DOIT INDiquer LA QUANTITE TOTALE DE SUCRE QU'ELLE CONTIENT

Le Ministre de la santé et du bien-être social, Monsieur Marc Lalonde, et le Ministre de la consommation et des corporations, Monsieur Tony Abbott, ont dernièrement proposé que la quantité de sucre ou d'autres produits édulcorant en regard du poids total de céréale, soit indiquée sur les étiquettes des boîtes de céréale.

Cette proposition est formulée dans une lettre adressée à tous les fabricants de céréales par les Services de protection de la santé, Ministère de la santé et du bien-être social. Cette lettre expose également diverses propositions concernant le minimum obligatoire de vitamines et de minéraux que doivent contenir tous les produits de céréales.

Les Services de protection de la santé ont dernièrement effectué une enquête

sur le contenu de sucre des céréales canadiennes. Ils ont fait l'analyse de soixante-quatorze céréales et les résultats démontrent que le sucre représente, dans certaines céréales, jusqu'à 56% de leur poids total. Certains aliments dont le sucre est le principal ingrédient, comme par exemple les bonbons et les boissons gazeuses, sont facilement identifiés mais le public n'est pas toujours au courant de la quantité considérable de sucre qui fait partie de certains produits alimentaires, notamment certaines céréales pour le déjeuner.

Monsieur Lalonde note que l'emploi excessif de sucre entraîne la carie dentaire, trouble très répandu au Canada.

Le Rapport dentaire Nutrition Canada, document publié récemment, fait

remarquer jusqu'à quel point la santé dentaire de la population canadienne est affectée par les caries.

L'Association des Orthodontistes

A son assemblée annuelle tenue le 9 juin 1977, l'Association des Orthodontistes de la Province de Québec a élu les personnes suivantes membres de son Comité Exécutif: Roger Dufresne, président; David Flam, président-élu; Steven Miller, 1er vice-président; Jean-Marc Fortin, 2ième vice-président; René Buorcier, secrétaire; Raymond Asselin, trésorier; Ezra Kleinman, membre sans portefeuille; et, Leonard Prosterman, président-sortant.

LE STUDY CLUB AJOUTE \$3,000 A SON FONDS DE FIDUCIE

En mars 1976, les Drs Arthur Breglia et Noble Hori présentaient, au nom du Crown and Bridge Study Club (Groupe d'étude des couronnes et ponts) de l'Académie dentaire de Toronto, un chèque de l'ordre de \$5,000 au Fonds canadien pour l'enseignement dentaire.

Le but de ce don généreux était l'établissement d'un fonds de fiducie, dont le revenu annuel était destiné à assister le financement des programmes du FCED qui avancent l'enseignement et la recherche dentaires.

Le Study Club déclarait à cette époque qu'il espérait accroître cette somme dès que possible.

Pour le Study Club, il ne s'agissait évidemment pas simplement de mots, ainsi que prouve le chèque s'élevant à \$3,000 dernièrement présenté par les Drs Ronald Martin, ancien président, et Murray Buchman, président, à M. Bud Bower, fiduciaire fondateur et ancien président du FCED et M. Murray

McDonald, Directeur exécutif du Fonds.

Alors qu'il acceptait ce dernier don, M. Bower a déclaré: "Le revenu annuel de ce fonds de fiducie nous vient vraiment en aide pour atteindre nos objectifs et représente pour tous un

grand encouragement. Nous sommes profondément reconnaissants au Crown and Bridge Study Club pour l'aide généreuse qu'il nous apporte et nous espérons que son exemple stimulera d'autres organismes semblables à suivre ses traces."

Le bonheur conjugal

Avez-vous déjà remarqué à quel point certains fournisseurs de produits dentaires sont aux petits soins pour vous... puis, soudain, vous laissent tomber, au moment où vous avez le plus besoin d'eux?

Vous feriez bien mieux de faire appel à un fournisseur sérieux comme Denco, qui offre une gamme complète de produits, qui recherche des normes élevées en fait de soins dentaires... et qui déploie des efforts extraordinaires pour vous livrer les produits et vous offrir les services qu'il vous faut, au moment où il vous les faut.

Songez-y, Docteur. Votre expertise... la qualité de nos produits et de nos services. L'accord parfait.

Nous sommes une maison digne de confiance, sensible à vos exigences... nous ne vous laisserons pas dans le pétrin.

DENCO

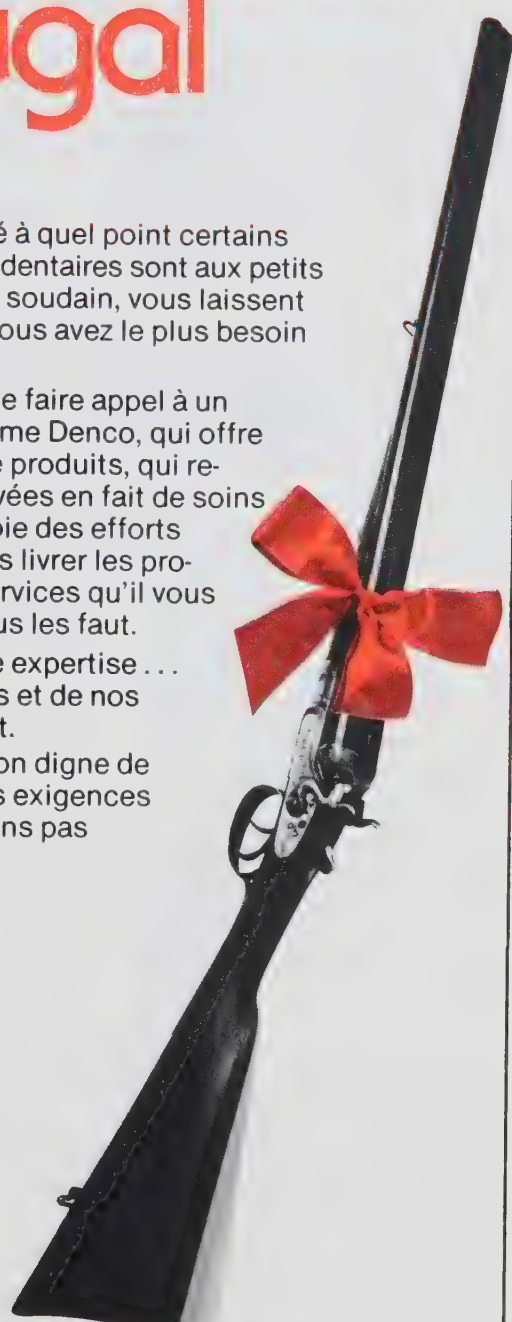
Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 31 août, 1977:

<i>Fonds d'actions ordinaires</i>	\$28.075
<i>Fonds à revenu fixe</i>	\$19.978
<i>Fonds avec garantie</i>	\$13.919

L'avoir total (valeur marchande) du régime se montait à \$25,956,365.34.

Pour de plus amples renseignements, veuillez écrire à CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ontario M5R 2P2.



BIOPSIES: CLINICAL AND LABORATORY CONSIDERATIONS

J. R. Trott, MDS (Adel), FRACDS, FRCD(C)
D. Morrow, DMD (Man)
Winnipeg

This article outlines the benefits and limitations of biopsies. The clinical technique for obtaining a biopsy is explained and also the laboratory procedures involved in processing a biopsy are described.

There appears to be an increasing awareness by both general dental practitioners and specialists (Fig 1) that a pathological report on a tissue sample may be a valuable adjunct to a clinical diagnosis.¹

The first and most common situation facing the pathologist occurs when tissue is taken from lesions when the clinical diagnosis is clear-cut and the dentist requires confirmation. This procedure is important in that occasionally a report will come back which will not confirm the original diagnosis even though the lesion appeared harmless. The value then is both practical and educational in that the treatment rendered will be appropriate and the clinician will mentally review the clinical signs and symptoms and either conclude that he missed something or that the situation needs to be investigated further. Although this means that the laboratory sees a lot of so called "routine" material, there is no doubt that it serves as an adjunct to patient care and provides a good continual review process for the practitioner and the pathologist. Unfortunately, into this large group also fall most of the malignancies seen by practitioners and oral pathologists. Approximately one per cent of all specimens of a "routine" nature which a pathologist receives from dentists will unexpectedly turn out to be neoplastic. One can see from Table 1 that only four out of the 30 epidermal carcinoma processed by this laboratory were correctly diagnosed originally by the clinician. All other types of malignant tissues have been excluded from this table. The point at issue is not a question of diagnostic acumen, but rather the outstanding fact known to us all and then forgotten that neoplasia can present in its earliest clinical stages as a number of other common conditions. Although these figures may appear low, it must be borne in mind that for the individual patient they are 100 per cent. Thus, there is no doubt that a confirmatory diagnosis on what might appear a "routine" case is sound clinical practice, not only because it might be neoplastic, but information regarding the spectrum of biological processes occur-

ring could help the clinician with his treatment and particularly the prognosis.

The second and less common situation that confronts the pathologist is when the clinician is faced with symptoms and signs that appear inconclusive or when a rare condition presents. In these situations, as in the previous one, the closest collaboration between clinician and pathologist is necessary at all stages of the diagnostic process.

Clinical procedure for obtaining a biopsy

The surgeon's notes

Besides a well taken and relevant piece of tissue, nothing is more important to the pathologist than the surgeon's clinical notes and the differential diagnosis (Fig 2). Care over detail is important; beginning with the patient's name. In this day and age, both in Canada and many other countries, the range of names is such that it is frequently difficult for filing clerks and secretaries to work out which are the first names and the surname, so that they frequently become reversed. In a cross reference filing system where something like 16,000 biopsies are seen a year, a mistake such as this can take several days to unravel. Thus, nurses and secretaries should ensure that such details as name, age, address, etc., are accurately filled on the forms and on the specimen

PROVEN CARCINOMATA HISTOLOGICALLY

Diagnosis	SITE					
	Not Specified	Floor of Mouth	Buccal Mucosa	Lip	Tongue	Gum
Carcinoma		3	1			
Keratosis	1			1	1	2
Leukoplakia	3		1			3
Ulceration	1	1			1	2
Chronic Inflammation					1	
Erythroplasia			1			
No diagnosis			1			3
Lichen planus	1					1
Denture hyperplasia			1			
Sub Total	6	4	5	1	3	11
Total	30					

Table 1

Fig 1 Data obtained from a recent survey of six million Canadian dental schools which operate a biopsy service, showing the percentage distribution of figures received from various sources. Note that general practitioners and specialists are the main contributors.

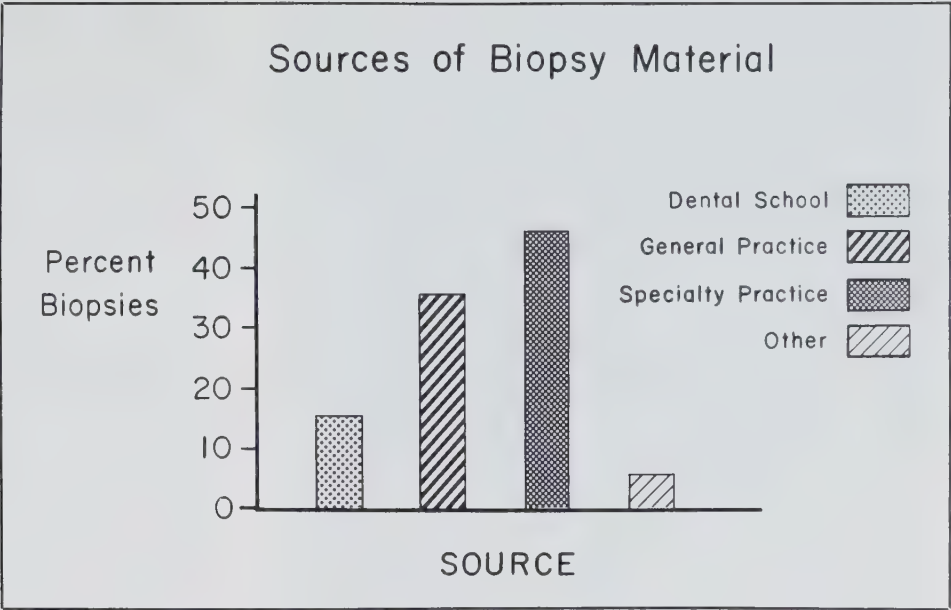
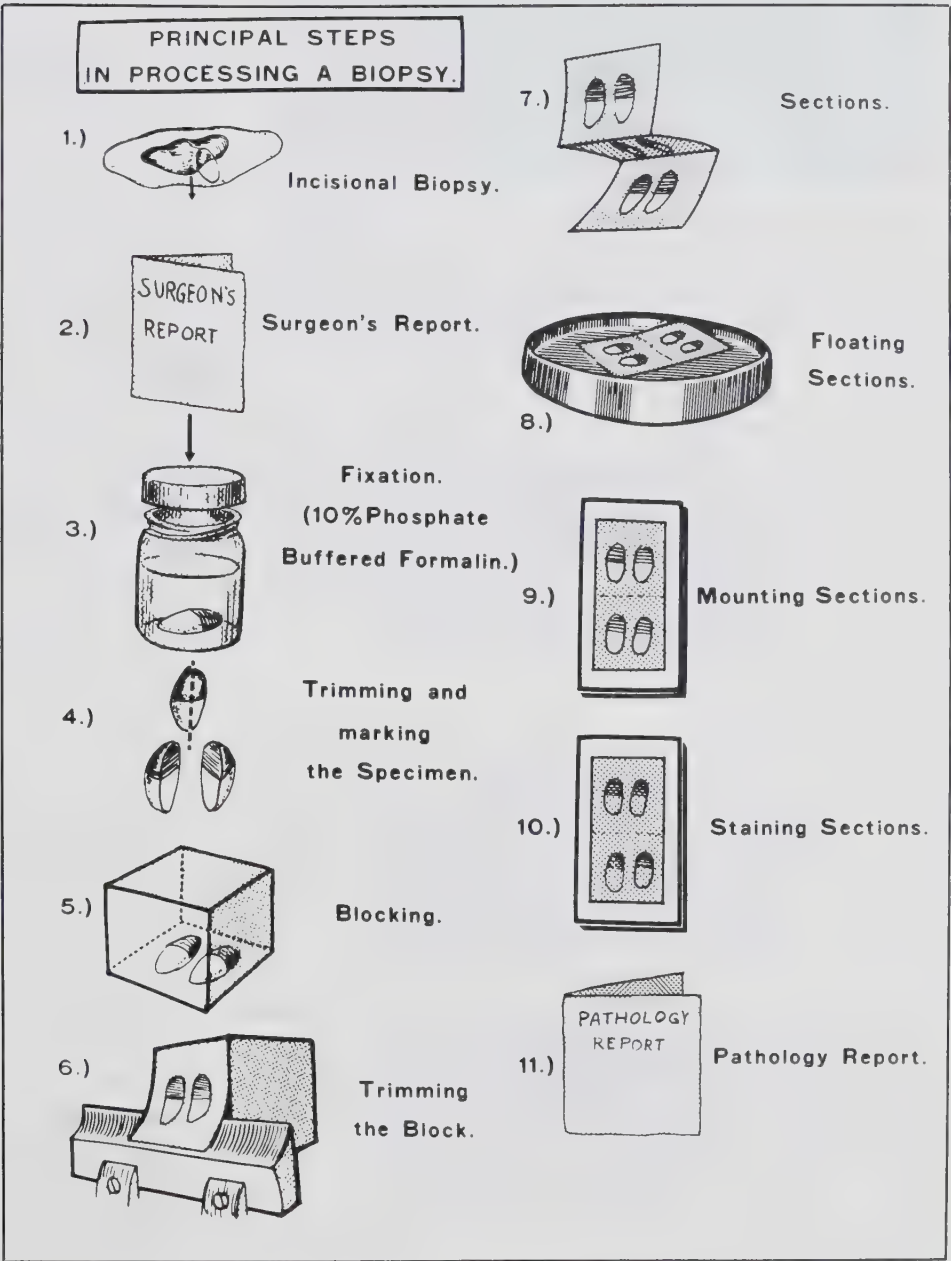


Fig 2 A diagrammatic representation of the various stages in processing a specimen, from the time it is excised to the point where a pathology report is written.



bottles so that mistakes such as these do not occur. Next, the surgeon should give the pathologist, in as concise a form as possible, all the relevant information about the lesion which may be of diagnostic help, such as medical history, drugs the patient is taking or has taken, familial or social history, occupation, whether lymph nodes are involved and, where necessary, the x-ray findings and photographs. Many excellent charts are available to the surgeon in which to sketch in the lesion or lesions, thus enabling the pathologist to know precisely where the specimen was taken from. Whatever method is used, it is in the best interest of the patient for all relevant information to be passed on to the pathologist — this cannot be emphasized too strongly.

Taking the specimen

Much has been written on trying to specify when one should perform an excisional biopsy as opposed to an incisional biopsy.² Obviously, it is a matter of surgical judgment but there are one or two important points to keep in mind.

It is important first and foremost to take the sample from an area or areas which will reveal as much information as possible to the pathologist.³ Thus, the specimen should include a good margin of "normal" tissue as well as an adequate sample of the area under investigation, both in length, depth, and breadth.

Length — It is a surgical-pathological truism that all other things being equal, a 10 mm incision will heal at the same rate as a 3 mm incision, because in soft tissues healing occurs along both edges of the wound simultaneously, not from the ends only. Thus, in principle there is no need for ultra short specimens. Obviously this general rule has to be bent in practice because of anatomical landmarks, size of the lesion, amount of ulceration and the number of types of lesions being investigated. Nevertheless, an adequate length of incision will make it easier for the surgeon to manipulate the tissue gently and also give the pathologist something he can handle to obtain maximum information through the various stages of processing.

Breadth — There appear to be two basic types of intra-oral incisions dental surgeons use, elliptical and pie- or wedge-shaped.² The former appears to be used when an excisional biopsy is being performed and the latter when an incisional biopsy is undertaken. In either case, there are dangers which can be avoided by the surgeon. In the wedge-shaped specimen, several problems can emerge for the pathologist.

In Fig 3, specimen 1, unless otherwise indicated, it is virtually impossible to trim the specimen after fixation along either side "a" or "b" for in doing so one might remove the piece of tissue under question. If it is not trimmed it is not impossible to process but it does raise difficulties for the technologist who, at a later stage, has to line up the block and trim before collecting tissue samples. In Fig 3, specimen 2 one has ended up with an equilateral triangle and following fixation it is sometimes extremely difficult to tell which of the three edges to embed. Even surgeons who

originally took such a shaped specimen find it virtually impossible to tell which edge is which. Therefore it is essential that a mark of some kind be used to indicate to the laboratory the orientation of the specimen. Frequently a small piece of suture may be placed through the tissue at "c". Jolly¹ suggests the use of Castellani's paint as a method for marking specimens. In Fig 3, specimen 3, one has a good margin of normal tissue associated with the lesion, yet unless either side "a" or "b" is carefully marked, the choice is open to the pathologist and it is quite possible that when the surgeon took the specimen the particular piece of tissue under question is side "a" and not side "b", and thus, due to a lack of careful marking, the pathologist could readily make an error. Elliptical shaped specimens are most frequently associated with excisional biopsy but by no means always. Fig 3, specimen 4, gives an adequate piece of tissue which can be trimmed in a N-S axis and will enable sections to be taken from both halves of the specimen. It is virtually impossible to cut a specimen exactly in half so this means that, in many cases, one can obtain two different aspects of the lesion. If however, the elliptical excision ends up as a very fine cigar-shaped specimen as in Fig 3, specimen 5, then about the only option open to pathologists is to attempt to trim along one side. This can make blocking at a later stage difficult.

When the elliptical specimen is an excisional biopsy one can end up with four types of specimens. In Fig 4, specimen 1, a solid lump of tissue to include the whole lesion has been excised (Fig 5). One has little option other than to trim the lesion down the N-S axis in the centre — unless it is large enough to take several cuts all about 4 mm thick. Fig 4, specimen 2, represents a small lesion removed "in toto". It is best to trim this specimen in the E-W axis, as one of the features a pathologist looks for in the sections is whether there is a sufficient margin of normal tissue present. In such shaped specimens it is more likely that the margin of the lesion will not be completely cleared on either the E or W side, but it will be clear on the N and S side. In Fig 4, specimen 3, an excision which started off with the intention of being elliptical ended up close enough to being a circle so as to make it virtually impossible to know which is the best axis to trim the specimen. Fig 4, specimen 4, is a cigar shaped incision specimen not too dissimilar in its problem to the one in Fig 3, specimen 5. Theoretically, it should be trimmed in an E-W axis, however, the actual lesion can be so small that the only safe way to pick it up in the sections is to attempt a longitudinal section in the N-S axis.

Depth — The third and probably most important aspect of the biopsy is the inclusion of adequate underlying tissue. Not only must it be adequate in depth but also include the total dimensions of the specimen. Obviously, there are surgical and anatomical limitations to this general principle. However, one should keep in mind that the underlying tissue should be incised vertically and not at an acute angle (Fig 6). In Fig 6, specimen 1, it is shown that with either a wedge shaped or elliptical incision, the tissue must be cut to an adequate depth at right-angles to the epithelium prior to

Incisional Biopsy

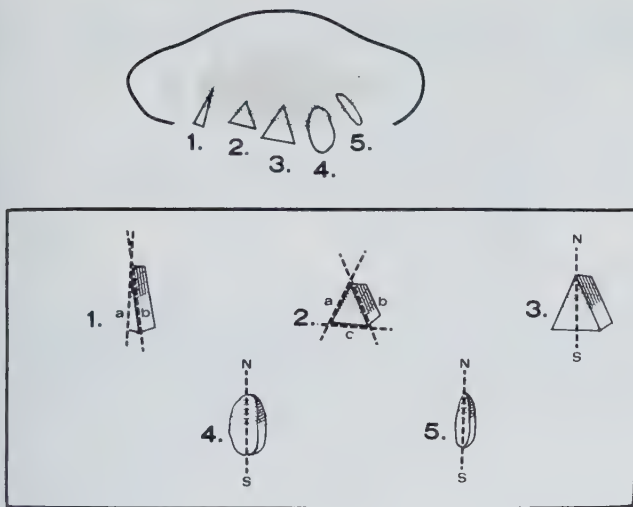


Fig 3 A series of diagrams to illustrate the varying shapes of incisional biopsies received in the laboratory. The dotted lines illustrate the possible lines of trimming the specimen and thus the side that will be eventually blocked and cut.

Excisional Biopsy.

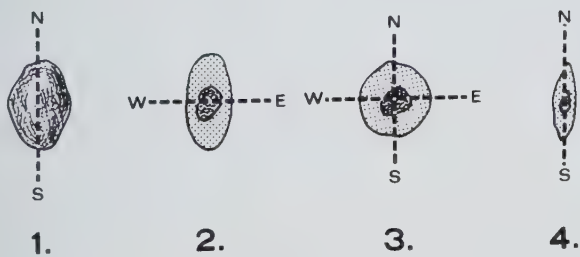


Fig 4 A series of diagrams to illustrate the varying shapes of excisional biopsies and the preferred axes for trimming the specimens prior to blocking and cutting.

Fig 5 A total excision biopsy of a lesion trimmed through its centre; see Fig 4 (1). Diagnosis — fibro epithelial polyp. Stain H & E. Orig. mag. $\times 10$.

Fig 6 A diagram to illustrate the importance of the depth and angle of incision in taking a biopsy. (1) Here adequate connective tissue has been taken, both laterally and deep to the lesion. (2) By angling the lateral incision, inadequate tissue is likely to be obtained as well as making it difficult to trim. (3) Completely inadequate connective tissue has been obtained in this specimen.

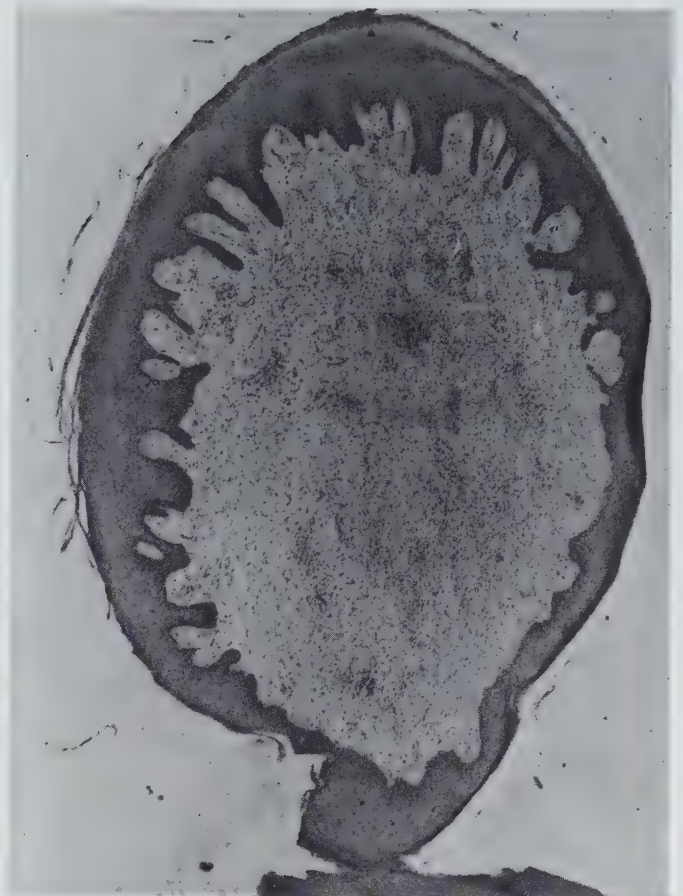
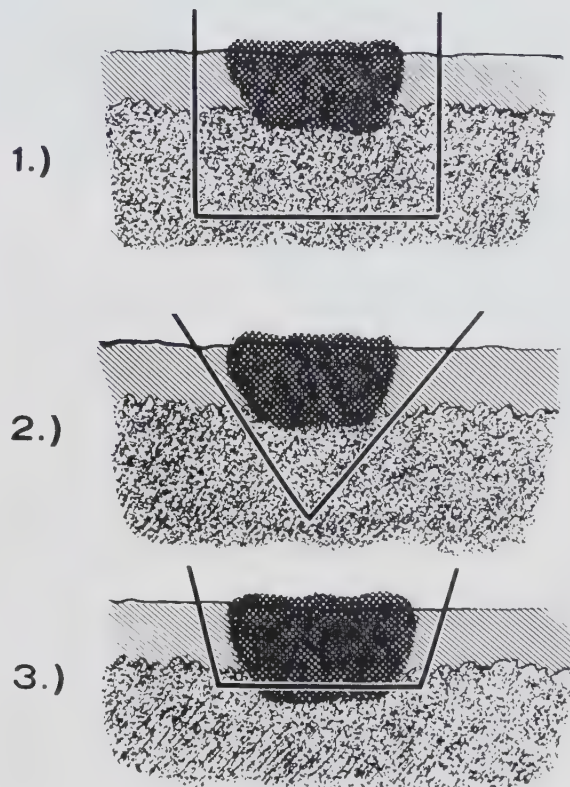


Fig 5

Fig 6

DEPTH AND LINE OF CUT.



the removal of the total specimen. Fig 6, specimen 2, is a frequent hazard of cutting at an angle particularly with an elliptical shaped specimen. The result is to make trimming and blocking very difficult. Fig 6, specimen 3, is a surgical triumph but a pathologist's nightmare. Luckily, they are few but are virtually impossible to issue a report on with any degree of confidence (Fig 7).

Laboratory procedure

Fixation

The whole future of the surgical specimen depends upon immediate and complete fixation in an appropriate medium. Thus, bottles containing the fixative should be carefully labelled with the patient's name and in the case where more than one biopsy is taken from the patient, numbered, so that the surgeon can inform the pathologist the area from which each specimen was taken. This should be done at the time the specimen or specimens are being taken, as it is very easy to mix them up later. The amount of fluid should be about 20 times the volume of the specimen and the thickest part of any specimen should ideally be no more than 5-7 mm, although there is some latitude here. If the surgeon excises a larger piece of tissue, which is rare, then he should divide it himself in the plane he feels is best, mark it accordingly and again record the fact in the notes he sends to the pathologist. Histological laboratories have evolved a wide range of fixatives for special purposes. Thus if the surgeon ahead of time feels the specimen might require special histological investigation, it is wise to check with the laboratory ahead of time what fixative should be used. We have found for all general purposes that a 10 per cent phosphate buffered formalin fixative is as good as any.

37% - 40% formalin	100 ml
Distilled water	900 ml
Sodium phosphate monobasic	4.0 gm
Sodium dibasic (anhydrous)	6.5 gm

Examination of the cross specimen

Surgical specimens are usually allowed to fix for 24 hours prior to processing. Once fixation is complete the specimen is examined grossly, the main normal and abnormal features recorded, photographed if necessary and then trimmed and marked for embedding. Although many of the clinical features are lost during fixation, such as the normal colour of the mucosa and erythematous areas, enough remain in a good specimen to identify the important anatomical and pathological landmarks. The pathologist also has the advantage that when the specimen is being trimmed the deep aspects of the tissue can be examined for any abnormalities. Often these are not obvious to the surgeon who has to deal with haemorrhage and does not have the advantage of examining the gross specimen at leisure. It is also at this stage that the pathologist can make decisions about how best to trim and embed the specimen to give the maximum amount of information.

Trimming, processing and cutting the specimen

These are probably the most important steps taken by the laboratory, for at this stage the pathologist has to make a decision on how to cut the specimen to give him the orientation to produce sections which will yield the maximum information.

Usually one will attempt to trim the specimen at right angles to the epithelial surface, to include the maximum amount of questionable tissue, as well as a margin of normal tissue. One will notice from Fig 3 the axes along which one would trim the gross specimen; and also that specimens 1, 2 and 5 are particularly difficult to trim satisfactorily to get the best cut. With this type of biopsy one already knows from the general conformity of the specimen and the surgical notes that no attempt has been made to include the whole lesion. In Fig 4, specimen 1, there is little choice but to trim through the long axis and to embed both halves. In specimen 2, however, one will trim in an E-W axis to obtain the very necessary information of whether the lesion has been completely removed at these margins. If it is removed in this axis then the likelihood of it being cleared in the N-S axis is almost certain. Young¹ proposed a four-way trimming and embedding technique for some specimens so that one can be sure of all borders (Fig 8). This is not always possible as each piece may become too small to handle with any degree of accuracy, but it is a very useful technique.

At this stage the surface to be "face down" in the block is marked with mercurochrome and this is the plane of sectioning from which the sections will be produced.

The tissue is then processed, usually overnight, through alcohols, xylol and finally into warm liquid paraffin wax, prior to being blocked. At this stage the tissue or tissues are placed with the marked "face" flat on a surface and wax poured around them which is then allowed to set hard.

The wax blocked specimen is mounted in a microtome and carefully aligned so that the marked "face" of the tissue is very nearly parallel to the cutting edge of the microtome knife. A minimal number of cuts are made into the face of the blocked tissue to ensure that one is preserving the entire area. One is then ready to take tissue sections at approximately 6-7 microns which are then mounted and stained with haematoxylin and eosin prior to their being examined.

From the time tissue is removed from the patient until it is blocked, there will be approximately a 20 per cent shrinkage. In specimens which are small to deal with in the first place, this makes accurate embedding and cutting virtually impossible. Thus, what might appear to the surgeon as a huge "chunk" of tissue in fact can become a nightmare to the pathologist and his technician.

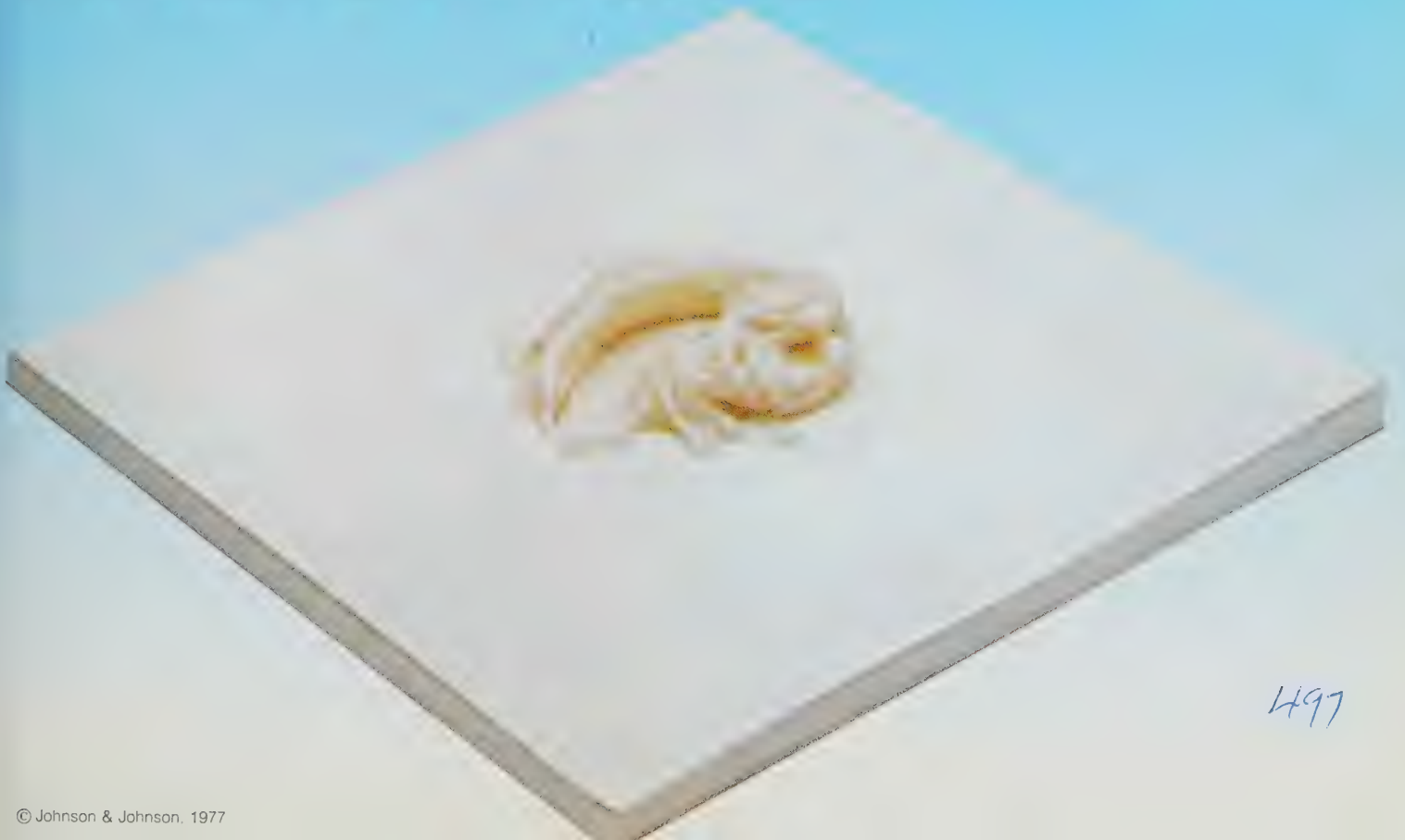
The third dimension

By the methods already described, one hopes to get not just a random sample of tissue but the best sample of tissue which will yield the most information in two dimensions. Sometimes there is a lingering doubt in the pathologist's

NOW ADAPTIC^{*} DENTAL
RESTORATIVE
**GIVES YOU A NEW
CHOICE IN HANDLING.**

**“Creamy”
Consistency.**

**ADAPTIC^{*}
RADIOPAQUE.**



497



"Creamy" Consistency

Every dentist is an individual. Most like the firm handling of ADAPTIC* Regular. But many have asked for a smoother-flowing restorative — now it's here!! ADAPTIC* Radiopaque mixes easily, readily adapts to the preparation and smooths into place beautifully. Chemically compatible with ADAPTIC* Bonding Agent, ADAPTIC* Glaze and ADAPTIC* Tints.



Easy Finishing

The same new filler which provides radiopacity also gives you a smooth, easy finish. ADAPTIC* Radiopaque quickly smooths into the cavity preparation and lets you shape the material easily with finishing instruments.



Strength and Beauty

ADAPTIC* Radiopaque is basically the same formulation proved by ADAPTIC* Restorative's 9-year clinical history and over 300 million restorations.

All significant physical characteristics are comparable. You can be assured that ADAPTIC* Radiopaque will deliver the lasting beauty which has made ADAPTIC* the leader over the years.



Radiopacity

The X-ray above demonstrates the radiopacity of ADAPTIC* Radiopaque. Notice the clarity and contrast. You now can combine the diagnostic benefits of radiopacity with reliability you count on from Johnson & Johnson.

ADAPTIC* Radiopaque Composite Restorative Material is *Provisionally Acceptable* for use in Class III and Class V restorations and for limited use in Class I restorations in premolars and selected Class IV restorations where esthetics is of primary importance.

Council on Dental Materials and Devices
American Dental Association



Johnson & Johnson
LIMITED

MONTREAL, TORONTO & VANCOUVER - CANADA

DENTAL DIVISION DENTAIRE

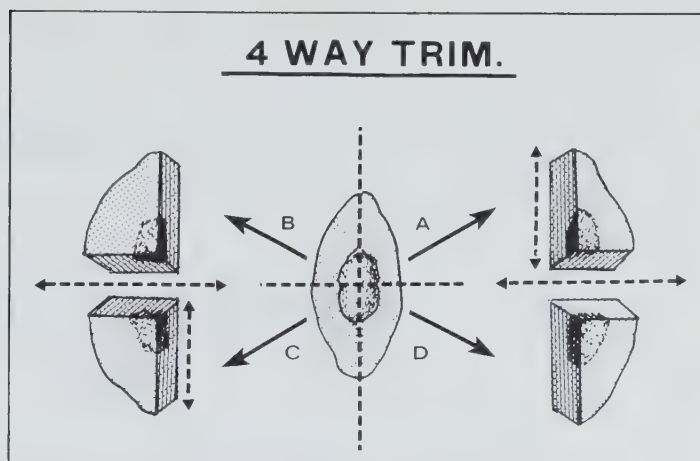
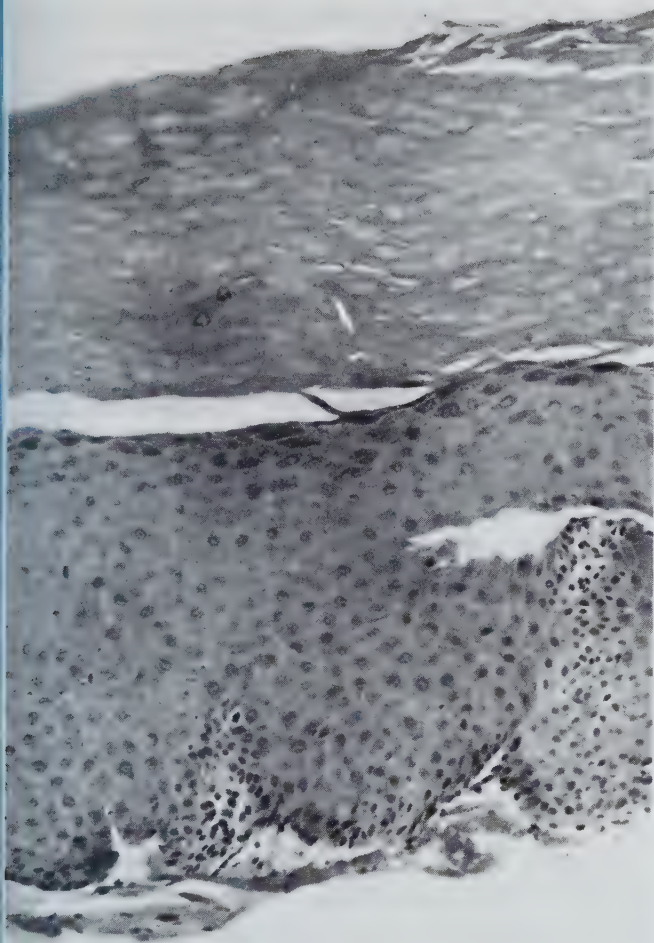


Fig 8 Given an excisional biopsy of sufficient size that it can be trimmed and blocked according to this diagram, the confidence with which a report can be made is increased.

Fig 7 (left) A photomicrograph of a keratotic lesion where insufficient allowance has been made to obtain a good sample of adjacent connective tissue. See Fig 6 (3). Diagnosis, nil. Stain H & E. Mag $\times 60$.

mind that more information can or should be obtained in the third dimension — depth.

There are a number of ways around the problem. In the first instance, if the size of the specimen right from the beginning is of such a nature that two, three or four pieces can be trimmed so that one, in fact, is taking a random sample through the specimen at large, then this is the most advantageous method. In this case each piece is frequently embedded in one block, thus enabling a good sample of the tissue to be cut and examined. Such techniques are very useful in the examination of cysts which may contain ameloblastic elements in their walls, or with large pieces of “leukoplakia” where one is looking for epithelial changes.

Another method is to take “step” sections through a block. Here one may cut four or five sections, then continue cutting but not keeping the next 30 or 100 sections and then collect another sample and so work one’s way through the deeper aspects of the tissue until one is satisfied.

Lastly, one could cut serial sections through a block. For all practical purposes this is an enormous task as it would work out to be approximately 200 sections per millimeter of tissue, so that if one has a piece of tissue 4 mm thick, there will be close to 800 sections to scan. Not a task undertaken lightly in a diagnostic laboratory for routine purposes.

The awkward specimen

Tissue specimens which twist and curl following fixation are very difficult to trim satisfactorily. Particular care should

be taken of thin epithelial specimens which include underlying muscle as these are particularly liable to distortion. There is a simple way to reduce the problem and that is to place the tissue mucosal surface upwards on some heavy blotting paper and then place the specimen in formalin. Thin walled cysts curl and twist badly, but usually it is possible to take several slices of tissue and to examine the inside wall. One would have to agree that in many instances the orientation is not always the best. Heterogenous pieces of tissue following curettage of an area cannot usually be orientated at all, and thus one does the best one can by embedding them all for examination and diagnosis.

Special situations

A number of new methods are now being used in diagnosis. The practitioner should be aware of these more sophisticated methods, when they can be used and what is involved for both the dentist and patient.

Immunological studies — Those cases needing investigation of a specific antibody, such as in a case of suspected primary herpes simplex virus infection or the rheumatoid factor in a case of Sjogren’s syndrome, require that a 10 ml vacutainer syringe containing no anti-coagulants be used to collect blood. The tube should be stored upright in a refrigerator and sent to the laboratory on the same day. The blood will clot and the clear yellow fluid at the top is the serum needed for the tests. It is necessary to indicate on the

request to the laboratory either the specific infection which is suspected or the type of antibody analysis that is required.

If there is a possibility that lymphocyte function needs investigation, and this could either be the question of their ability to migrate from a fine capillary tube in the presence or absence of specific antigens or the toxic effect on the cells again from specific antigens, then viable intact cells are needed for examination. Since this last requirement is paramount, arrangements should be made with the laboratory which will do the tests to collect their own blood as a series of steps have to be taken, not only to separate the lymphocytes from the other cells but also to keep them viable for the various tests that can be performed.

If an autoimmune response is suspected, such as pemphigus or bullous pemphigoid, biopsy tissue can be collected in a special way so that in the laboratory it can then be divided, one for routine examination and the other for specific immunofluorescence. The method we have used for some years is that of Sainte-Marie.⁵ All that is required is that the biopsy, which should be no more than 4-5 mm thick (which is usual) be placed in a small bottle of pre-cooled 95 per cent ethanol. The bottle of fixing fluid should be cooled to 4°C in the refrigerator, and as soon as the specimen has been taken it should be stored in the refrigerator and transported to the laboratory either in ice or on dry ice. Once there, it can be divided into two pieces, one for regular H & E processing and one for cold processing prior to the use of specific fluorescent conjugated antibodies.

Frozen sections — A biopsy specimen can be taken directly from a patient, quickly frozen in a special cooling chamber and while still frozen, sections can be cut and quickly stained so that it is possible to have a pathologist's report in 15-20 minutes. The cryostat of freezing microtome obviously has a real place in general surgery where a decision on the extent of surgery depends entirely on an immediate answer from the pathologist. Generally speaking, such absolute urgency does not exist with regard to lesions of the oral cavity. Most tissues are reported upon within 24-48 hours and then if any further surgery is contemplated, it can be carefully planned.

Electron microscopy — A number of laboratories may well have ready access to an electron microscope. There are a number of situations in diagnosis where one may have to resort to such sophistication. The essential element in EM work is a small piece of fresh tissue, usually 1-2 mm, which can be sliced into even smaller pieces once it is rapidly fixed. Thus, after one takes a normal biopsy, a fresh, sharp razor blade is used to remove a small piece which is then placed in a small glass vial with neutral buffered formalin and sent to the laboratory with the main biopsy for special post fixation, so that EM specimens can be obtained.

Imprinting — As the name implies, cells from a lesion are transferred directly to a glass slide by merely pressing the slide onto the lesion prior to any surgical biopsy. Several slides should be taken, allowed to air dry and then packed in

special cardboard containers and sent with the surgical specimen for staining and examination. This technique is particularly useful when one wants to examine the morphology of cells in a single layer. Lymphomas are probably the second largest group of tumours to occur in the oral cavity after carcinomas, and in conjunction with the biopsy it is very useful to examine them in either ultra-thin sections or on imprints.

The report

Pathologists vary widely in the types of reports they issue. Some will give just a diagnosis, others will write a comprehensive essay on the histological features present before giving a diagnosis; then there is everything in between these two extremes. Most, probably strike a happy medium by giving enough detail to put the dentist into the picture of how a diagnosis was arrived at. It is therefore essential that dentists should read and understand the reports, for to read just the diagnosis is frequently not enough. Within the report there may be important information with regard to the margins of the lesions, the adequacy or otherwise of the biopsy, the degree of cellular activity — all of which may have a bearing on the prognosis and/or future treatment.

Nomenclature is one continual "headache." Most oral pathology laboratories have either adopted or modified an already existing and tested model. Frequently, these come from such sources as the WHO, which has published a number of small books on various pathological subjects; or the system may be one that is readily adaptable to computer programming, such as the "Systematized Nomenclature of Pathology". In either case, there are bound to be apparent discrepancies between the "dental" diagnosis and the laboratory classification due to the number of synonyms that abound, both in usage and in the literature. There is no simple way around this peculiar problem other than for both parties involved to be quite clear that they are talking about the same thing, but if there is any doubt then immediate communications should be established.

Discussion

There is a tendency to place an unwarranted amount of faith in biopsy diagnosis. At the moment, and certainly into the foreseeable future, it will still be the major method for clinching a clinical diagnosis. However, this paper is an attempt to explain to practitioners that the mere taking of a tissue sample does not guarantee results. There are a large series of steps between taking the tissue and interpreting the slide. A number of people are involved, from the person who must ensure the bottle is correctly labelled to the technician who has to process the tissue, as well as the surgeon and the pathologist. There is always a chance of human error in this long chain of events; some can be rectified, others are irreversible and only by the highest co-operation

Continued on page 502

STATUS REPORT: PERIODONTAL DRESSINGS

Periodontal dressings are mainly used for postoperative care following periodontal surgical procedures. Formerly, they were also employed to displace and reduce edematous gingival tissue prior to scaling and root planing, but this practice has now been largely superseded by alternative treatment modalities.

As surgical dressings, they cover the healing wound and protect it from saliva, food stagnation and trauma, thereby making the postoperative period more comfortable and healing more rapid. They also help to prevent proliferation of granulation tissue in the interdental spaces.

Requirements

Periodontal dressings should be bland, non-allergenic and non-irritating to the tissues. After mixing, they should remain plastic for a sufficient period to permit moulding by gentle pressure around the teeth and into the interdental spaces. The surface should be smooth so as not to irritate the oral mucosa. Dressings should be resistant to pressure without fracturing and capable of withstanding displacement or distortion by cheeks, lips and tongue. An acceptable taste, haemostasis, and the ability to inhibit bacterial growth on the surface are other desirable properties of dressings.

Several types of periodontal dressings are available. The following examples are representative:

Zinc oxide-eugenol

These preparations are represented by Ward's "Wondrpak", Box's and Kirkland-Kaiser dressings. The powders consist mainly of zinc oxide and hydrogenated resin, with lesser amounts of asbestos fibre and tannic acid. The liquid phase is mainly eugenol. Zinc oxide and eugenol are there to provide the setting. The resin dissolves in the eugenol and reacts with the zinc oxide to form zinc abiete which reinforces the mass. Tannic acid has long been used on healing tissue but is now discouraged because of the risk of direct absorption and resultant liver damage. Asbestos is likewise deprecated because of the possibility of causing asbestosis.

Some powders contain small quantities of zinc acetate or zinc stearate which catalyse the setting.¹ A vegetable oil is commonly added as a diluent to the liquid phase. Thymol is also incorporated in some formulations, presumably as an antiseptic.

The powder and liquid are mixed to a thick putty consistency. After initial mixing with a wooden spatula the mix is kneaded manually until a firm, easily manipulated mass is obtained which can be shaped into a long thin roll. Small pieces are cut off and pressed firmly between the teeth with a flat plastic instrument. The rest of the dressing is applied in one piece to the labial and lingual surfaces, pressed into place and muscle trimmed. Retention of the dressing may be improved by threading it with a short length of dental floss before it is applied to the teeth.

Non-eugenol dressings

Though eugenol possesses anodyne properties, it is also irritating to the tissues and may, in fact, sometimes delay healing. Moreover, many patients find its all-pervading taste objectionable. Several dressings without eugenol have therefore been developed. One of these, a putty-like material devised by Baer, Sumner and Miller,² is based on a powder of zinc oxide and hydrogenated vegetable fat with added zinc bacitracin. Being thermoplastic, this material will soften in the mouth. Advantages are ease of preparation in quantity and ready storage for use.

Another non-eugenol preparation, Coe-Pak, has proved very popular. It is supplied as two pastes which are mixed together before application. One paste consists of zinc oxide, magnesium oxide, calcium hydroxide and lorothidol — a fungicide related to hexachlorophene. The other paste is composed of liquid coconut fatty acids, a hydrogenated resin and chlorothymol. The pastes are easy to mix and apply once the required consistency is attained. The material when mixed is extremely adhesive and sets to a smooth firm consistency by soap formation between the zinc oxide and the fatty acids. The resultant dressing has a very dense smooth surface which is well tolerated by the tissues. Retention is achieved by pressing the dressing through the interdental spaces.

Although the bacteriostatic and germicidal qualities of chlorothymol are better than those of eugenol, recent evidence suggests that Coe-Pak has only minimal antibacterial activity and that it is successful because of its physical rather than germicidal properties.³ It remains cleaner in the mouth than the asbestos-resin dressing, has no unpleasant taste, and is well accepted by patients.

Cyanoacrylate dressings

Because conventional periodontal dressings are sometimes bulky and inconvenient, new adhesive dressings with a capacity to adhere to tissue have been introduced during the past decade. The higher homologues of cyanoacrylates have been shown to be safe to apply to human tissues. They possess properties that are of great interest in the surgical field: excellent haemostasis, rapid adhesion of tissues, and potential bacteriostatic qualities. N-butyl and isobutyl cyanoacrylates can be applied in drips or as a spray. Rapid polymerization to solid state is catalyzed by moisture, and the resultant material adheres to the wound surface. Being biodegradable, it is then gradually depolymerized and phagocytosed over a period of two to seven days.

In practice, application of cyanoacrylates can be difficult when a large wound surface must be covered; when the wound area is small, however, as in the free gingival graft donor site, cyanoacrylate is easy to use and well tolerated by the patient. It can also be used in place of sutures to fix the graft to the recipient bed, but the cyanoacrylate must not be allowed to seep between the donor and recipient tissues, creating an impenetrable barrier to revascularization of the graft.

It should be noted by the clinician that only approved materials should be used. The use of commercial industrial cyanoacrylate glues is deprecated.

Comparison of the effects of zinc oxide eugenol, non-eugenol and cyanoacrylate dressings on denuded bone, par-

tial thickness flaps and full thickness mucoperiosteal flaps reveals no microscopic difference in healing. Each of these materials therefore has its proponents, and the choice is often a matter of individual preference. Recent studies indicate that all present dressings allow proliferation of bacteria at the tissue interface and thus regular replacement is advisable.⁴ Antibacterial dressings containing, for example, chlorhexidine may become available.⁵

The Council is grateful for the preparation of this report by Dr. F. Compton, who is engaged in the private practice of periodontics, and is an associate at the Faculty of Dentistry, University of Toronto.

- 1 Smith, D. C. A materialistic look at periodontal packs. *Dent Pract* 20:263, 1970.
- 2 Baer, P. N., Sumner, C. F. and Miller, G. Periodontal dressings. *Dent Clin N Amer* 13:181, 1969.
- 3 O'Neil, T. C. A. Antibacterial properties of periodontal dressings. *J Periodont* 46:469, 1975.
- 4 Heaney, T. G. and Appleton, J. The effect of periodontal dressings on the healthy periodontium. *J Clin Periodont* 3:66, 1975.
- 5 Addy, M. and Douglas, W. H. A chlorhexidine-containing methacrylic gel as a periodontal dressing. *J Periodont* 46:465, 1975.

Biopsies . . .

Continued from page 500

can the best results be achieved. Just as the pathologist can rightfully expect the maximum amount of clinical information to help in the histological diagnosis, so the practitioner should be aware and knowledgeable about what happens to his specimen following excision. Only then will the laboratories be able to improve their service to the practitioner.

One point should always remain uppermost in the clinician's mind — he should never accept a pathological report at face value. First and foremost, a negative report does not mean there is nothing of importance present; it only means that the pathologist did not notice anything. This could mean that the surgeon did not quite get the right area, or if he did, the pathologist cut it in such a way that it was missed. Secondly, the histological report should bear out the practitioner's clinical impressions, not arrive as a thunderbolt from the sky. If this happens, both parties must closely check what has occurred until both are satisfied by

the results, for it is the clinician who takes the ultimate responsibility.

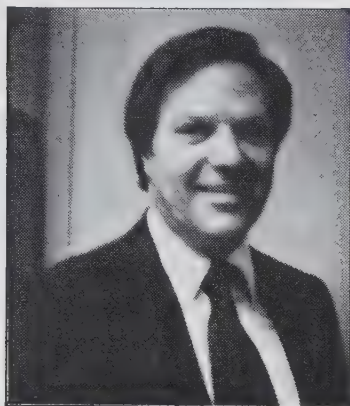
Dr. Trott is a professor of oral pathology at the Department of Oral Biology, Faculty of Dentistry, University of Manitoba, Winnipeg.

Dr. Morrow is a PhD graduate student in oral pathology at the University of Manitoba.

- 1 Jolly, M. Minimizing biopsy error. *Int J Oral Surg* 5:41, 1976.
- 2 Cannell, H.. Biopsies in general practice. *Dent Update* 2:235, 1975.
- 3 Rubin, P. Clinical oncology for medical students and physicians. Ed 4. University of Rochester School of Medicine and Dentistry, American Cancer Society, 1974.
- 4 Young, W. G. Personal communication, 1967.
- 5 Sainte-Marie, G. A paraffin embedding technique for studies employing immunofluorescence. *J Histochem Cytochem* 10:250, 1962.

Weil is at FDI...

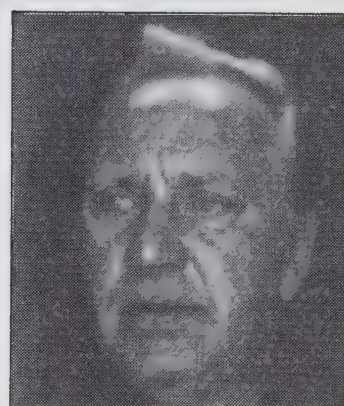
Come and meet some of us!



Dr. Richard W. Chaikin
Quintessence Publishing Co.,
Germany — U.S.A.



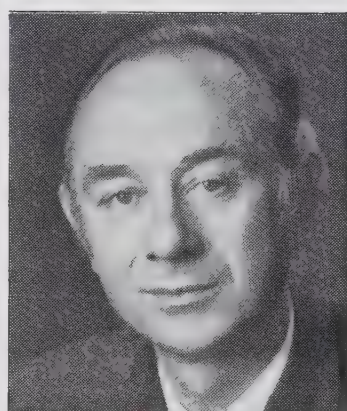
Mr. H.W. Haase
Quintessence Publishing Co.,
Germany — U.S.A.



Mr. Hans Flinsberg
Flima Dental,
Germany



Mr. S.M. Cowan
Pran Chemical Manufacturing Co.,
Canada



Mr. Karl-Heinz Noack
Hager & Meisinger GMBH,
Germany



Mr. Horst Graffelmann
Hager & Meisinger GMBH,
Germany



Ms. Joy Yaffe
Kurer Research & Development Ltd.,
England

Meisinger		STABILOK		SILMET		LITEMA		TITANIUM SPLINTING BARS BY Zela™	
FLIMA DENTAL		qb quintessence books		GUARANTEED		HI-DI DIAMONDS		INSTA-NEG INSTA-FIX	
SVEDIA ENKÖPING SWEDEN		LORVIC		VEREINIGTE DENTALWERKE ANTAEO BEUTELROCK ZIPPERER ZDARSKY EHRLEIN KG MÜNCHEN 70		PRODUITS DENTAIRES S.A. VEVEY-SUISSE PRODUCT		Dentatus	
KURER ANCHOR RETENTION SYSTEM		dentalvarutjänst ab Tennistgatan 2, 702 27 Örebro		MM MICRO MEGA		ap		B.K.	
						SCREW POST SYSTEM			

Let us talk new technical advances with you!

AETIOLOGY AND INVESTIGATION OF THE SORE MOUTH

Ralph I. Brooke, BChD., LDS, FDS, RCS, MRCS, LRCP, FRCD(C)

David P. Seganski, DMD
London, Ont.

The findings in 55 cases of sore mouth, in the absence of clinical signs, are reviewed. The three commonest etiologic factors are found to be iron deficiency, depression, and candidosis. The relationship of these to sore mouth as well as to each other is discussed.

Soreness of the mouth is a common reason for patients to seek dental advice. Diagnosis, when the condition is associated with physical signs, may be difficult. When there are no associated physical signs, the difficulty becomes much greater. The purpose of this article is to review the findings in 55 cases of sore mouth, unassociated with physical signs, and to suggest routes of investigation that may be useful in arriving at a diagnosis.

Materials and methods

The patients were seen in the Oral Medicine Clinic, University of Western Ontario, between 1972 and 1977. Most were in the 50-70 year age group, the range being 27-82 years (Fig 1). Forty-nine of the 55 patients were women.

Twenty-eight patients (51 per cent) complained of a sore tongue and 14 (26 per cent) of a generalized soreness of the mouth. The remaining 13 patients complained of soreness in other parts of the mouth, including gingivae, lips and inner surface of cheeks. Six patients (11 per cent) complained of dryness in the mouth and four (seven per cent) of altered taste. A fear of cancer was frequently expressed.

Half the patients had had symptoms for one year or less, the remainder for varying periods up to 11 years (Table 1).

Thirty-two of the patients (58 per cent) had a variety of additional symptoms (Table 2). Twelve were overtly depressed and seven complained of altered sensation in the mouth or throat.

There was a history of previous treatment in 23 patients (Table 3). This varied from systemic medication, e.g. antibiotics, multi-vitamin therapy, to local measures, such as smoothing of sharp teeth. In no case had complete relief been achieved. Only cases in which clinical examination revealed no abnormality of the soft tissues or teeth, which could account for the condition, were included in the series.

All patients had a full haematological investigation carried out, including haemoglobin and film, serum iron levels, total iron binding capacity and percent saturation of transferrin. Other haematologic and biochemical tests were carried out, e.g. B₁₂ and folate levels when indicated by the initial haematologic investigation or by other clinical findings. A smear was taken to exclude candidosis.

Findings

Haemoglobin and blood film — The range was 11.3 to 16.0 grams, per cent, the average being 13.5. Only three patients were found to be anemic, with haemoglobin levels of 11.3, 11.8, and 11.9 grams, per cent. All three had associated iron deficiency. Twenty-five of the patients demonstrated anisocytosis.

Serum iron — Twenty-three patients had serum iron levels below 65 micrograms, per cent and 25 patients had a percent saturation of transferrin less than 20 per cent.

B₁₂ and Folate — Eight patients had B₁₂ levels determined, none of whom demonstrated a deficiency. Two patients showed a deficiency in folic acid, accompanied by other findings in both cases.

Candida albicans — Seven patients had a smear which was compatible with a diagnosis of candidosis.

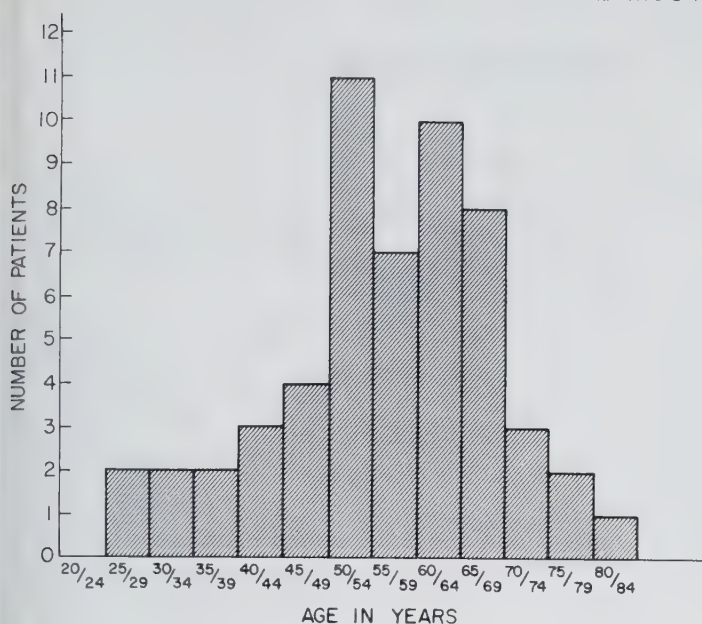
Diagnosis

A firm diagnosis was possible in 41 cases (75 per cent). As will be seen from Table 4, the commonest diagnosis was of iron deficiency. This was seen in 29 patients and was accompanied by other disorders in 15 of these. A low serum iron level was seen in the presence of *normal* haemoglobin levels in all but three subjects. The cause of the sore mouth was felt to have a psychogenic component in 17 cases and in nine cases the discomfort was felt to be solely psychogenic. Seven of these patients had depression and five had anxiety neurosis.

Discussion

In a series of 55 cases of sore mouth unassociated with physical signs, three main etiologic factors appeared to be

AGE RANGE OF 55 PATIENTS WITH SORE MOUTH



Duration of symptoms in 55 patients with sore mouth

Table 1

Duration	No. of patients
Less than 1 year	26
1-2 years	8
2-3 years	5
3 years or more	9
Uncertain of duration	7

of significance, i.e. iron deficiency, depression and candidosis.

Iron Deficiency — A deficiency of iron was discovered in 29 patients (53 per cent); 24 (44 per cent) of these had no other associated positive findings. None of these patients was grossly anaemic and only three showed even moderate anaemia.

A recent study¹ points out the high incidence of iron deficiency in Canadians, especially in the high risk groups (adolescence, menstruating women and pregnant women). As almost 80 per cent of our patients were not in this high risk group, it is unlikely that the large percentage of cases of iron deficiency was simply a chance finding.

Our means for determining iron deficiency was by measurement of serum iron concentration and the percent saturation of transferrin. Although bone marrow examination for stainable iron is a more accurate means of detecting iron deficiency,² we feel that serum iron concentration is an adequately sensitive index of the earliest stages of iron

Additional symptoms found in group of patients complaining of sore mouth

Table 2

Depression	12
Altered sensation in mouth and throat	7
Altered sensation elsewhere in body	5
Anxiety neurosis	5
Swelling in mouth (not detected at time of examination)	5
Headache	4
Chronic tiredness	2
Burning sensation of eyes	2

Previous treatments attempted in 23 patients (some patients received more than one form of therapy)

Table 3

SYSTEMIC

Multivitamin therapy	6
Antidepressant therapy	6
Anti-anxiety agents	4
Antibiotics	4
Antifungals	2
Analgesics	1
Hormones	1
Iron therapy	1

LOCAL

Hydrogen peroxide	2
Cortisone ointment	2
Tooth extraction	1
Probe submandibular duct	1
Stop smoking	1
Silver nitrate	1
Smooth teeth	1
Denture adjustment	1
Xylocaine ointment	1

Diagnosis in 55 patients with sore mouth

Table 4

Diagnosis	No.	%
Iron deficiency	16	29
Iron deficiency with depression	5	9
Iron deficiency with neurosis	3	6
Iron deficiency with candidosis	4	7
Iron deficiency with folate deficiency	1	2
Depression	7	13
Anxiety neurosis	2	4
Candidosis	2	4
Candidosis with folate deficiency	1	2
Diagnosis not made	14	26

deficiency, i.e. a reduction in body iron stores.¹ In addition, the determination of serum iron concentration is simple and convenient when compared with marrow studies and may thus be used as a routine investigation.

Iron deficiency in the absence of anaemia (sideropenia) has been recognized as a pathologic state linked with many signs and symptoms. It was first documented in 1844 and the literature has been reviewed by Beutler, Larsh and Gurney.² The symptoms of iron deficiency include chronic fatigue, dizziness, headache, indigestion, gastrointestinal disturbances, palpitation and shortness of breath. Signs include glossitis, atrophic tongue, angular stomatitis, kiolonychia, dysphagia due to post-cricoid esophageal webs and chronic atrophic rhinitis.³⁻⁷

The cases in our series appear to underline the relationship between sore mouth in the absence of clinical signs and iron deficiency. It may be that the sore mouth is an early indicator of iron deficiency.

In patients demonstrating iron deficiency, especially those in the low risk group, the presence of an underlying pathology must be ruled out.

Depression — Depression has also been shown to have some relationship with iron deficiency. It has been shown that a statistically significant number of patients with depressive symptoms are also iron deficient.⁸ We found that of the 12 cases in which there was a history of depression, five were also iron deficient, thus supporting this condition.

Depression may express itself in a wide variety of somatic symptoms, such as anorexia, constipation, weight loss, lassitude, fatigue and hypochondriasis.⁹ In addition to these, burning mouth or tongue can be included. In a report involving 21 patients suffering from ideopathic burning mouth, Schoenberg et al⁹ judged 81 per cent to be overtly depressed, with the remaining 19 per cent showing some signs of depression. Only 22 per cent of our patients were

overtly depressed but we agree, with Schoenberg et al, that depression must be specifically investigated when diagnosing a sore or burning mouth in the absence of clinical signs.

Candidosis — In 21 of our cases, it was felt that a smear for candida albicans was indicated. In seven of these, sufficient fungal forms were identified to make a diagnosis of candidosis. One of these was associated with a folate deficiency and four with an iron deficiency.

Oral candidosis exists in several forms and the symptoms associated with it range from the painful erosion seen in acute atrophic candidosis to the frequent absence of symptoms seen in chronic candidosis. Although in all types of oral candidosis, specific oral lesions are described,¹⁰ an absence of signs does not eliminate the possibility of a candidal infection. Candidosis should therefore always be considered in the aetiology of the sore mouth even in the absence of clinical signs. It must also be remembered that iron deficiency is often present in cases of oral candidosis.¹¹

Conclusions

In this series, a substantial number of patients, despite the absence of clinical signs, were found to have haematologic disorders and/or candidosis. In addition, a significant proportion of patients, although not overtly depressed, were seen to have manifestations of depression when carefully evaluated. For these reasons, it is suggested that the investigation of the three above-mentioned problems always be undertaken for patients who present with a sore mouth.

Dr. Brooke is professor and chairman, Department of Oral Medicine, University of Western Ontario, London, Ontario.

Dr. Seganski is a graduate student, Faculties of Dentistry, University of Western Ontario and University of Saskatchewan.



- 1 Valberg, L. S., Sorbie, J., Ludwig, J. et al. Serum ferritin and iron status of Canadians. *Canad Med Ass J* 114:417, 1976.
- 2 Beutler, E., Larsh, S. E. and Gurney, C. W. Iron therapy in chronically fatigued, nonanemic women: a double blind study. *Ann Intern Med* 52:378, 1960.
- 3 Chisholm, M. In clinics in haematology. Vol 2. S. T. Callander, Ed. Philadelphia, Saunders.
- 4 Fielding, J., Fry, J. and Turnbull, A. L. Iron deficiency, *Medicine Today*, Postscript No. 6, 1966.
- 5 Waldenström, J. L. Iron and epithelium. Some clinical observations. *Acta Med Scand* 90:380, 1938.
- 6 Walters, G. O. Iron deficiency anemia. *Practitioner* 212:493, 1974.
- 7 Zakrzewski, A., Topilko, A. and Zakrzewski, J. Nasal mucosa in the iron deficient state. A clinical and electron-microscopic study. *Acta Otolaryngol* 79:176, 1975.
- 8 Fischbach, R., Gastager, H. and Harter, G. Hyposideremia and endogenous depression. *Pharmakopsy* 6:252, 1973.
- 9 Schoenberg, B., Carr, A. C., Kutscher, A. H. et al. Chronic idiopathic orolingual pain. Psychogenesis of burning mouth. *NY State J Med* 71:1832, 1971.
- 10 Jenkins, W. M. M., Thomas, H. C. and Mason, D. K. Oral infections with *Candida Albicans*. *Scot Med J* 18:192, 1973.
- 11 Higgs, J. M., and Wells, R. S. Chronic mucocutaneous candidiasis: associated abnormalities of iron metabolism. *Brit J Dermat* 86, suppl 8:88, 1971.

CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE.

Direct advertising copy to:
Marie Cosgrave, Classified Advertising Manager,
Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6,
Telephone: (613) 523-1770.

CLASSIFIED ADVERTISING RATES

(Per Insertion Per Issue):

Minimum (50 words or less) \$15.00
Each additional word30
Service charge for C.D.A. Box No. 2.00

DISPLAY CLASSIFIED ADVERTISING RATES:

Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

OFFICES AND PRACTICES

BRITISH COLUMBIA — Fort Nelson. For Sale: One or two man practice located in north east British Columbia, the focal point of the Alaska Highway Pipeline. A boom situation in a stress free environment with all outdoor recreation facilities, including cross country skiing, fishing and hiking. Write to: Dr. J. Morris, 2255 Frost Avenue, Sidney, B.C. or phone: (604) 656-1347.

BRITISH COLUMBIA — Vancouver. Dentist is invited to take over three-year-old renovated premise. Downtown location. Present dentist wishes to relocate practice. Three operatories, lab, dispensary, reception and waiting area. Total 700 square feet. Very reasonably priced. Phone: 684-1934.

BRITISH COLUMBIA — Victoria. For Sale: Two operator practice in downtown Victoria, with emphasis on relaxed and enjoyable conditions for both patients and staff. Good gross on cash basis. Reply to CDA Box Number 1736.

ALBERTA — Calgary. Nine-year-old dental practice in shopping mall in north west Calgary. High volume, low overhead, two operatories, one laboratory and reception area. Excellent opportunity for new graduate. Please contact: Dr. Peter Chan, 5008 Whitehorn Drive N.E., Calgary, Alta. Phone: 289-2367 or 285-2212.

ALBERTA — Calgary. Seven-year-old, two-man quality practice in desirable north-west area. Modern, one-year-old office in new professional building. Seven operatories, four fully equipped, three complete except for chair and unit. Suitable for one to three dentists. Reply to: box 10, Site 23, R.R. #2, Calgary, Alta., T2P 2G5. Phone: (1-403) 286-5030.

ALBERTA — Calgary. For Sale: Calgary practice with high gross. Three fully equipped operatories with modern equipment. Space for fourth operator. Reply to CDA Box Number 1662.

ALBERTA — Coaldale. Modern, new, air-conditioned office space available for dentist. Carpeted, partially plumbed and wired for dentist. Excellent location. Town population approximately 4,000 with a large farming area to draw from. For more information contact: Herb Klassen, Drawer 1206, Coaldale, Alta., T0K 0L0.

ALBERTA — Elk Point. Twenty-year-old "rural" practice for sale in small north-eastern Alberta town, 700 sq. ft. office with three operatories. Hospital privileges, high gross, low overhead. Excellent opportunity for immediate take over. Ideal outdoor recreation area with lakes and hunting. No cash outlay required. Reply to CDA Box Number 1692.

ALBERTA — Hinton. Five-year-old practice for sale. High gross, new building, 15 miles from National Park. Owner will associate for 6 to 12 months. Town of approximately 8,000 and growing rapidly. Excellent investment opportunities. Reply to CDA Box Number 1729.

SASKATCHEWAN — Battleford. Office space for rent. One or two dentists greatly needed. None in town. Large drawing area including North Battleford where dentists are heavily booked. Will build new air-conditioned office according to specifications. Write: Box 459, Battleford, Saskatchewan, S0M 0E0.

ONTARIO — Hawkesbury. Space for rent in newly constructed commercial center on Main St. in Hawkesbury. Four stores fronting Main St. and eight units at the rear at street level through an 8' arcade corridor. Available in areas of 600' or more. Accessible from street or entrance from parking lot for 160 cars. Dentists urgently required in this area. Apply to: Assaly Realities of Hawkesbury, 129 Main St. E., Hawkesbury, Ont. Phone (613) 632-2719.

ONTARIO — Kingston. Associate/For Sale: Well established family practice with modern equipped operatories — analgesia, audio-visual. Excellent opportunity for one or two preventive-oriented dentists. For further details, reply to CDA Box Number 1721.

ONTARIO — London area. Sacrifice — health reasons. New six-year practice available immediately. Exceptional opportunity for graduate or dentist seeking relocation. Phone: (519) 527-1530 (collect).

ONTARIO — Toronto. Well established, very busy, general practice for sale. Located at busy crossroads in suburban Toronto. Three operatories, lab, private office, dark room, waiting and reception. All disciplines of dentistry performed with a preventive attitude. Practitioner is leaving Toronto. Reply to CDA Box Number 1734, or phone: (416) 497-5538 (evenings).

QUEBEC — Montreal. Well established practice for sale, located on Côte des Neiges Road. In air-conditioned Medical Building. Two fully equipped operatories with Panorex and regular x-ray equipment, lab with dark room. Good opportunity for one or two dentists. Must sell the practice for health conditions. Reply to CDA Box Number 1730.

QUEBEC — Montreal. Quartier ouest. Pratique generale et preventive etablie depuis quatre annees. Quatre salles operatoires, deux entièrement équipées. Occasion unique pour un ou deux dentistes. Mille pieds carrés, laboratoire commercial voisin. Revenu brut annuel approchant cent mille dollars. Le propriétaire se spécialise. Casier A.D.C. no. 1709.

NEW BRUNSWICK — Petitcodiac. Thirty-year-old "rural" practice for sale in small south-eastern New Brunswick town. 450 square foot office with two chairs, waiting room, lab. 25 miles each from hospitals at Moncton and Sussex. Excellent opportunity for immediate take over. Excellent hunting, fishing, golf, etc. No cash outlay required. Reply to P.O. Box Number 88, Petitcodiac, N.B.

NOVA SCOTIA — Halifax. Spacious dental office for rent. Central location, ground floor, near universities and hospitals. Modern equipment for sale or rent. Dentist wishes to retire from an established practice of 30 years. Reply to: Dr. S. Chernin, 5943 Spring Garden Road, Halifax, N.S. Phone: (902) 423-6720, 429-3091.

IRELAND. Very lucrative, single handed practice for sale in thriving coast town, south Ireland. First class modern equipment. Late Victorian residence also for sale. Reply to CDA Box Number 1733.

ASSOCIATESHIP AVAILABLE

BRITISH COLUMBIA — Fernie. Full-time associate required with option to buy in about a year. Contact: Dr. R. H. Campbell, Box 130, Fernie, B.C.

BRITISH COLUMBIA — Vancouver. Part-time associate required for a well established, preventive orientated family practice. The associateship is available on a permanent basis, if desired. Contact: Dr. B. A. Mercs Weaver, 1436 Kingsway, Vancouver, B.C. V5N 2R5. Telephone (604) 879-2624 (office), (604) 987-0077 (residence).

BRITISH COLUMBIA — Vancouver Island — Duncan. Part-time associate required to share old, well established practice in a new air-conditioned location. Well equipped, all branches of dentistry catered to. Telephone: (604) 748-0722.

BRITISH COLUMBIA — Victoria. Young, associate dentist required. Four-chair modern operatories. Strictly medical-dental building (opposite Jubilee General Hospital). General anaesthesia privileges. Family-oriented practice. No capital outlay. Reply: Dr. B. Rauch, #310 - 1900 Richmond Ave., Victoria, B.C. V8R 4R2.

BRITISH COLUMBIA — Victoria. Full time dentist required for individual practice and perhaps partnership or outright purchase. Capital outlay required. Long and well established practice in desirable location. Reply to CDA Box Number 1737.

BRITISH COLUMBIA — Whistler Mountain. Powder snow capital of Canada. Associate required to provide two to three days' service per week and play the rest of the time. Deluxe accommodation available. All equipment provided. Reply to CDA Box Number 1735.

SASKATCHEWAN — Saskatoon. Full-time associate required in a busy high gross family practice. Two fully modern operatories available to associate in five-chair office. Possibility of purchase or partnership. Modern, air-conditioned Medical-Dental Building. Contact: Dr. R.E. Dickson, 621 Medical Arts Building, Saskatoon, Sask. S7K 3H3. Telephone: 653-3173 (home).

ONTARIO — Gore Bay. Associate wanted for well established and extremely busy modern dental office in pleasant rural community. Pollution free surroundings with many lakes and exceptional scenery — everything to offer for the outdoor enthusiast, and only five hours' drive from Toronto. Hospital affiliation is available, excellent opportunity to practice comprehensive preventive dentistry. Reply to CDA Box Number 1701.

ONTARIO — Hamilton. Associate for Dental Group Practice. Excellent associateship available in well established preventive group practice. Busy downtown location. Fully equipped office, congenial staff. Reply to CDA Box Number 1732.

ONTARIO — Toronto. Associate, full- or part-time required for modern preventive oriented practice in downtown Toronto. Enthusiastic dentist willing to work in all aspects of general practice preferred. Four, 4-handed operatories fully equipped. Reply to CDA Box Number 1728.

ONTARIO — Winchester. Associate required for established associateship practice in Winchester, 30 miles south of Ottawa. Available immediately on a full- or part-time basis. Modern 2000 square-foot office with six operatories, Cox equipment, Panelipse, and large lab area. Office includes Hygienist and Denture Therapist. Good opportunity. Contact: Dr. R.D. Wells, (613) 774-2616, or write: Box 729, Winchester, Ont. K0C 2K0.

QUEBEC — Montreal. Montreal has immediate opening available for part time associate. Ideal situation for intern willing to work Saturdays or evenings. Fully equipped operator, receptionist, assistant, hygienist. Conditions negotiable. Applicant might consider renting the operatory while building up his own practice. Write: Corla, 258 Sheraton Drive, Montreal West. Telephone: (514) 489-3774.

OPPORTUNITIES AVAILABLE

YUKON — Whitehorse. New Medical Arts Building under construction. Only one Dental Clinic in territory, and grossly overworked. Room for up to three dentists in above building, and welcomed by both medical and dental professions. Must be willing to take turns to cover outlying communities. May design own area within the building. Write: Family Practice Unit, 2099 2nd Avenue, Whitehorse, Yukon Territory, Y1A 1B5. Telephone (403) 667-6421.

BRITISH COLUMBIA — Prince George. Dental Hygienists required for large ultra modern dental group practice situated in the heart of British Columbia. Salary commensurate with experience. Medical, dental and group insurance available. Hours of work are flexible and conditions excellent. Please send resume to: Lakewood Dental Group, 4122 15th Avenue, Prince George, B.C. For further information, please call collect: Paul Minck, Dr. Dave Bowler or Dr. Don Robertson, (604) 562-5551.

BRITISH COLUMBIA — Village of Lantzville. 980 square feet of area on ground floor in new plaza in the Village of Lantzville. Beautiful beaches. Best climate in British Columbia. The village supports three doctors and a drug store. Reasonable rent. Apply for further information by writing or telephoning: A.J. Seversen Pharmacist, P.O. Box 190, Qualicum Beach, B.C. Phone: 752-9013 (day), 752-6566 (home).

MANITOBA — Gladstone. Seven Regions Health Centre requires a progressive dentist who is interested in settling in a rural community and providing a service that complements the Health Centre concept in our delivery of health care. This concept utilizes a multi-disciplinary approach to health and stresses prevention as well as providing a curative service. Phone collect (1-204) 285-2968 or write (including resume) to: Mr. Eugene T. Stefik, Executive Director, Seven Regions Health Centre, Box 1000, Gladstone Manitoba, R0J 0T0.

ONTARIO — Hamilton. Dental hygienist urgently required for full or part time position. Well established preventive group practice in downtown Hamilton. Please reply to CDA Box Number 1731.

ONTARIO — Toronto, Midtown. Opportunity available for Specialist or General Practitioner to relocate in modern office on an associateship or space sharing basis. Well trained efficient staff includes receptionist, chair-side and P.D.A. Reply to CDA Box Number 1727.

MONTREAL — Quebec. McGill University, Faculty of Dentistry, Department of Oral Surgery: Applications are invited for a full-time faculty position in the Department of Oral Surgery. Advanced training from an accredited post-doctoral program in oral surgery is required. Clinical teaching experience is highly desirable. Applicants must be prepared to meet the requirements of licensure in the Province of Quebec. Academic rank and salary of the successful applicant will be dependent upon qualifications and experience. Enquiries, accompanied by curriculum vitae, will be received in confidence by: Chairman, Search Committee, Department of Oral Surgery, McGill University, Faculty of Dentistry, 3640 University St., Montreal, P.Q. H3A 2B2.

QUEBEC — Montreal. McGill University Faculty of Dentistry, FIXED PROSTHODONTICS: Applications are invited for a full-time faculty position in the Department of Fixed Prosthodontics. Advanced training from an accredited post-doctoral program in prosthodontics with an emphasis in fixed prostheses is required. Clinical teaching experience is highly desirable. Applicants must be prepared to meet the requirements for licensure in the Province of Quebec. Academic rank and salary of the successful applicant will be dependent upon qualifications and experience. Enquiries, accompanied by curriculum vitae, will be received in confidence by: Chairman, Search Committee, Department of Fixed Prosthodontics, McGill University Faculty of Dentistry, 3640 University St., Montreal, P.Q.

QUEBEC — Montreal. Faculty of Dentistry — McGill University: Applications are invited for a full-time teaching position in the pre-clinical and clinical areas in the Department of Operative Dentistry. Such applications may also be considered for the Chairmanship of this department which is now vacant. Applicants must be graduates of an accredited dental program and preferably, have Graduate training in Restorative Dentistry. Preference will be given to those applicants who have private practice and teaching experience. Candidates must be eligible for licensure by the Order of Dentists of Quebec, and be prepared to fulfill French language requirements. Academic rank and salary will be commensurate with qualifications and experience. Please send curriculum vitae with references to: Chairman, Search Committee, Department of Operative Dentistry, Faculty of Dentistry, McGill University, 3640 University St., Montreal, P.Q. H3A 2B2.

JAMAICA — CUSO. Work Overseas. Dentists are needed to work in Jamaica's community dental health programme. A dentist is also required for the Dental Auxiliary School, Kingston, Jamaica, to teach school dental nurses and chair-side dental assistants. For job descriptions please contact: CUSO Health, 101 - 151 Slater Street, Ottawa, Ontario, K1P 5H5.

AUSTRALIA — Victoria. The Royal Dental Hospital of Melbourne, Deputy Dental Director. Applications are invited for the full-time position of Deputy Dental Director of the Hospital. The appointee will be required to assist the Dental Director in all matters relating to the professional services of the Hospital. The policy of the Hospital is to provide the highest achievable standards of service and facilities for both patient care and the teaching activities associated with the University of Melbourne. The terms and conditions of appointment shall be as prescribed in the Determination of the Hospital Dental Officers' Wages Board, and salary shall be as fixed by the Hospital Council from time to time. The present salary is approximately \$30,000.00 per annum and superannuation is available. Persons interested may obtain further information from the Administrator, Mr. W.R. Phillips. Applications close on Friday, 31st October 1977. Applications, which will be treated as confidential, together with the names of three referees and a passport photograph of the applicant, should be addressed as follows: Mr. R.H. Osman, The President, The Royal Dental Hospital of Melbourne, 711 Elizabeth Street, Melbourne, Victoria, Australia, 3000.

**FACULTY OF DENTISTRY
DALHOUSIE UNIVERSITY**

Assistant Dean for Academic Affairs

Applications or nominations are invited for the position of Assistant Dean for Academic Affairs in the Faculty of Dentistry, Dalhousie University. The Faculty now enrolls 25 dental students and 20 dental hygiene students in each class and conducts specialty programmes in Oral Surgery and Periodontics. Expansion is currently underway which will increase the dental and dental hygiene classes to 64 each and provide space for additional specialty programmes.

RESPONSIBILITIES:

Assist the Dean in the administration of the D.D.S. programme including some involvement in student affairs and clinical affairs. Aid in the administration and development of specialty programmes. Other responsibilities as assigned from time to time. Limited teaching and/or research activities may be arranged. Extra-mural private practice is possible if eligible for license in Nova Scotia.

QUALIFICATIONS:

Degree from Dental School accredited in Canada or U.S.A. Advance training in Education or a Dental Specialty. Demonstrated successful Faculty experience essential. Prior administrative experience desirable.

SALARY:

Commensurate with qualifications and experience.

Application/nominations should be received no later than December 1st, 1977 and mailed to:

**Dr. Ian C. Bennett, Dean
Faculty of Dentistry, Dalhousie University
5981 University Ave., Halifax, N.S. B3H 3J5**

**DENTISTS
REQUIRED**

Excellent opportunity for dentists who would like to participate in a Children's Dental Care Program.

The program features the latest concepts in dental health education, prevention and treatment for children up to twelve years of age. Most children are receiving services on a maintenance care basis.

Clinics have modern equipment for sit-down four-handed dentistry. Dental hygienists and formally trained dental assistants complete the dental health teams.

License to practice in P.E.I. is necessary.

Starting salary up to \$28,750* depending on experience and qualifications.

Apply:

**Director, Division of Dental Public Health
Department of Health, P.O. Box 3000
Charlottetown, P.E.I., C1A 7P1**

*Under review

OPPORTUNITIES WANTED

MANITOBA. British dentist with several years' experience in all phases of dentistry especially crown and bridge, wishes to relocate in Manitoba. Would consider associateship offers, or purchase of practice offers, either rural or urban. Available December or January 1978 (Taking Manitoba examinations in November 1977). Reply to CDA Box Number 1719.

ONTARIO — Ottawa/Cornwall. Efficient, astute personality looking for opportunity to apprentice in dental assisting. Please contact: Rochelle Robinson, 337 - 7th Street W., Cornwall, Ontario. Phone: Ottawa — (613) 233-9778, or Cornwall — (613) 938-3714.

QUEBEC — Longueuil. Dental hygienist, bilingual, recent graduate seeks employment, preferably full time in preventive practice in Montreal region. Hygiéniste dentaire, bilingue, récemment graduée recherche emploi de préférence à temps plein dans la région de Montréal. Include/Inclure: Nom, adresse, téléphone. Reply to/Ecrire à: CDA Box Number 1726.

EQUIPMENT

MANITOBA — Winnipeg. For Sale: 1 Ritter 180, amber-tan colour, 1 Dentsply, split spectrum (Mediterranean Design); used for 32 weeks. Will accept \$5,000.00 for each item or best offer. Please contact: Dr. R.E. Kirouac, #1 - 130 Marion Street, Winnipeg, Manitoba, R2H 0T4. Telephone: 247-4854.

ONTARIO — Guelph. For Sale: Ritter Century unit model J, blue; Ritter Motor chair, model E, blue; two Ritter Lights, silver, one with floor light mounting post; one Midwest Tru Torque, new, used only once. Phone: (519) 822-7340, Monday to Thursday; (519) 824-8822 evenings, or contact: 319 Speedvale Ave. E., Guelph, Ontario, N1E 1N4.

NEWFOUNDLAND — St. John's. For Sale. Human skull — in perfect condition. All 32 teeth present. Upper right lateral incisor completely rotated on axis. Price \$100.00. Reply to CDA Box Number 1725.

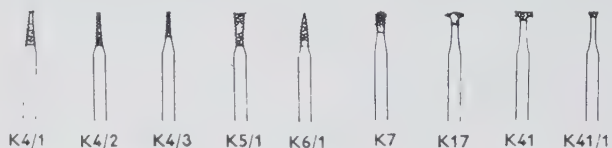
MISCELLANEOUS

BRITISH COLUMBIA — Prevost Island. For Sale. 104 acres in the heart of British Columbia's Gulf Islands, approximately 1½ miles of ocean-front. Minutes from the Royal Vancouver Yacht Club (Salt Spring Island). Midway between Vancouver and Victoria. Will sell all or subdivide into 10 acre parcels. Asking \$286,000. Contact: Kevin Bell, 537-5833, or Miller and Toynbee Realty Ltd., 537-5537.

PRACTICAL WOODTURNING. Are you interested in woodturning as a hobby? Take a two day intensive course for beginners from a qualified teacher. Cut wood the way it prefers to be cut. For further information write to: Practical Woodturning, Post Office Box 171, Brampton, Ontario, L6V 2L1.



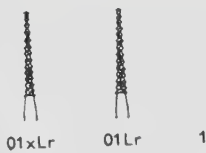
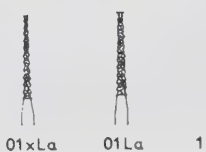
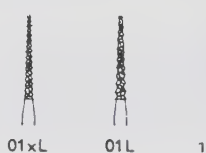
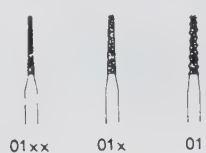
*So get with it kids! If you use my toothpaste
you'll have fewer cavities!*



FORCO

HORICO

**DIAMOND
INSTRUMENTS**



THESE, AND MANY MORE

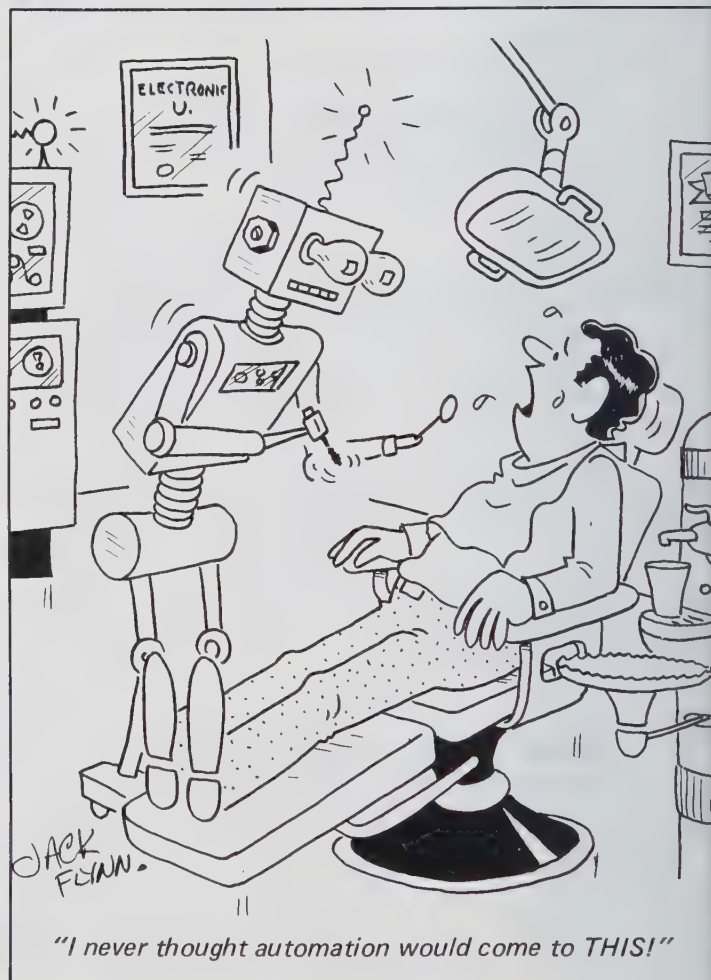
Write for Catalog No. 143

PFINGST & COMPANY, INC.
62 COOPER SQ. NEW YORK, N.Y. 10003

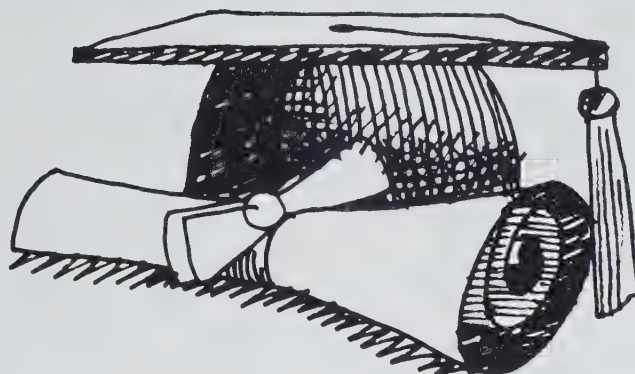
ADVERTISERS' INDEX

C. E. Attenborough	485
John O. Butler	465
Canadian Pharmaceutical Association	469, 470
The L. D. Caulk Co. of Canada	479, 480
Cooper Laboratories	OBC
Denco	491
Dentsply International	462, 476, 477, 489
G and C Industrial Corp.	472
Johnson and Johnson	497, 498
Lever Brothers	467
Nobilium	487
Novocol	IFC
Pfingst	510
Procter and Gamble	461
Professional Pharmaceutical	466
Weil Dental	503
Whaledent	483

Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.



Because you are... an Educated Man



You enjoy a title of respect in an honoured profession

You enjoy a rich inheritance from educated men who preceded you

You are part of a great tradition:

As an educated man, you share a special obligation to help preserve and extend this heritage for future generations

When you give to the Canadian Fund for Dental Education you help protect the standards and prestige of your profession by supporting CFDE's programs in behalf of dental education and dental care. If you haven't given yet to CFDE this year, please mail your tax-deductible contribution to:

Canadian Fund for Dental Education,
Suite 205, 44 Eglinton Avenue West,
Toronto, Ontario M4R 1A1



CANADIAN FUND FOR DENTAL EDUCATION

Your avenue for giving, to enhance the performance
and prestige of Dentistry

For teeth under attack

Oral-B®

The professionally designed
tooth/gum brush
for preventive dental care.



Cooper

Cooper Laboratories Limited, Boisbriand, Quebec

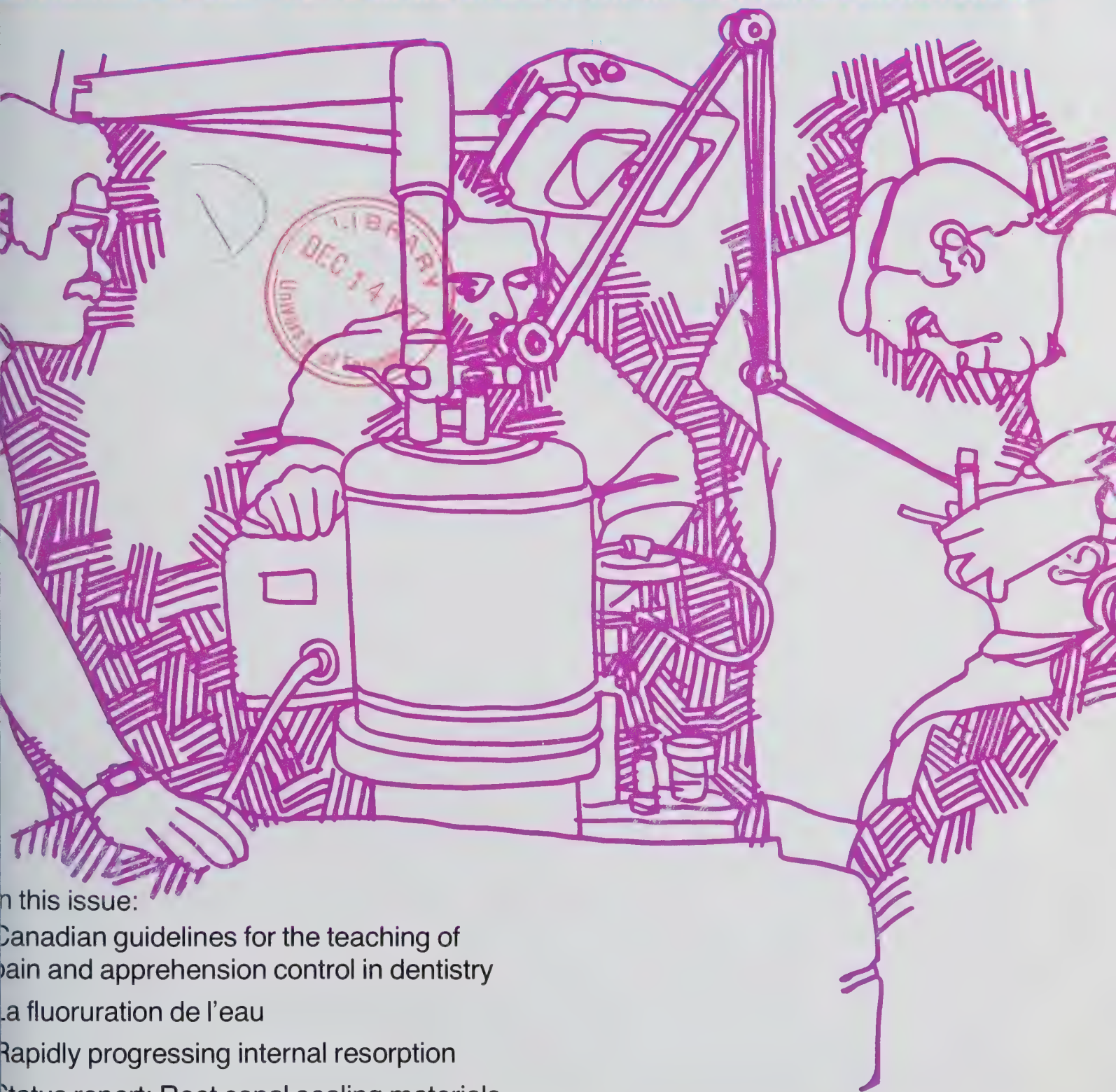
DENTAL JOURNAL DENTAIRE

Si non livrable
au destinataire
**RETOURNER A
L'EXPEDITEUR**
Port payé

If Undeliverable
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed.

Nov 1977/Volume 43/No 11

Canadian Dental Association/Association Dentaire Canadienne



In this issue:

Canadian guidelines for the teaching of
pain and apprehension control in dentistry

La fluoruration de l'eau

Rapidly progressing internal resorption

Status report: Root canal sealing materials

The Extraoral Film Story

in Panoramic Black and White.

Extraoral radiography used in conjunction with intraoral radiography tells the whole story.

After you've made periapical, or interproximal, or occlusal X-ray studies of your patient, you may find that in addition, you need a broader scope of information for your diagnosis.

You get it with extraoral radiography—in examinations of the mandible and the maxilla that call for a panoramic view of the oral structures on a single radiograph.

Kodak films for both extraoral and intraoral radiography give you high quality informative radiographs. And with proper processing, you'll need only a minimum of exposure.

For more information about our panoramic dental X-ray film, write:

Radiography Markets, Kodak Canada Ltd.,
3500 Eglinton Avenue West, Toronto, Ontario
M6M 1V3; or call a Kodak representative to
arrange an appointment.

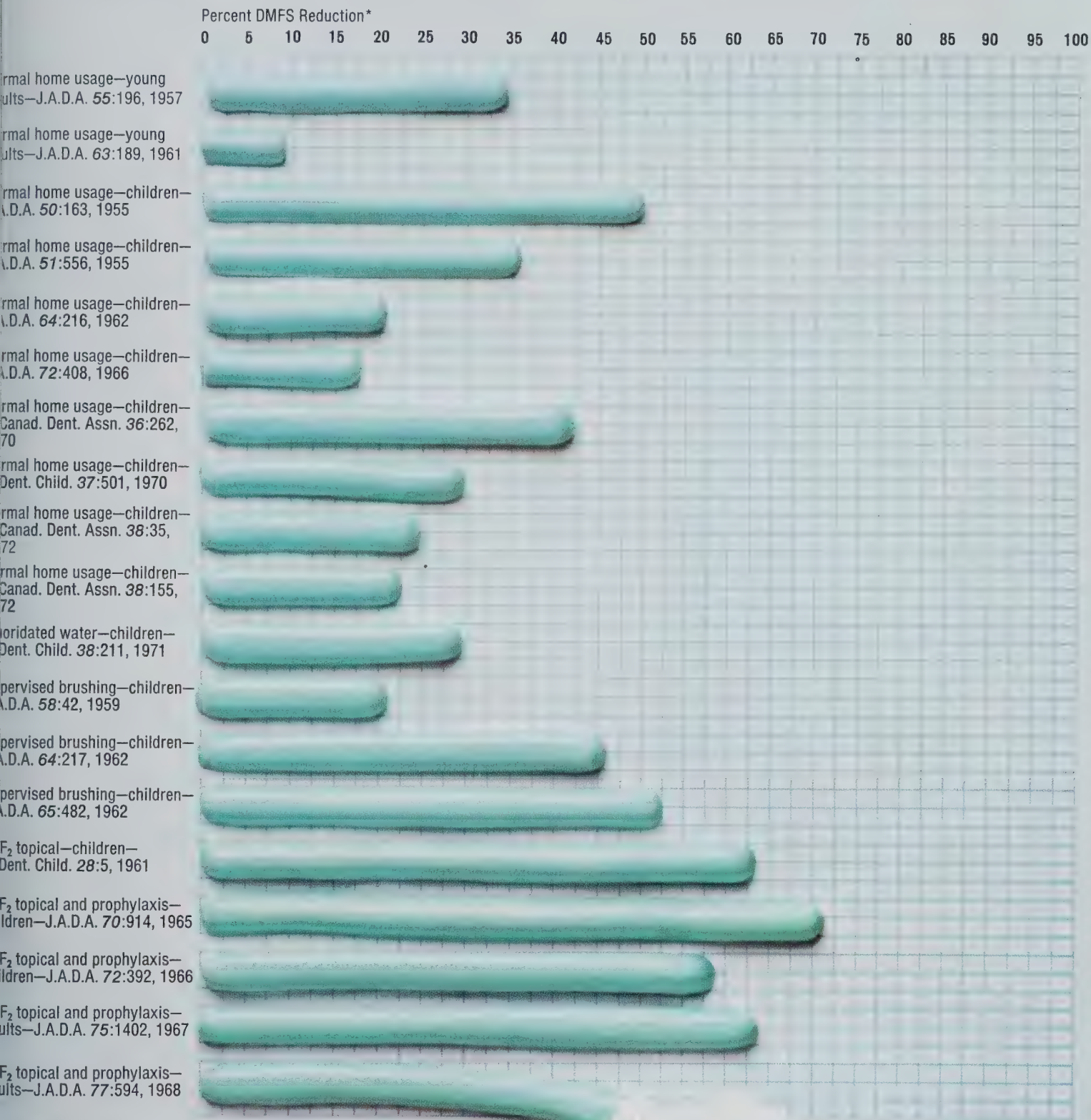


a commitment
to quality



Tested & Trusted

Crest effectiveness has been proven in more clinical tests under more conditions than any other fluoride dentifrice



"Crest has been shown to be an effective decay-preventive (anti-caries) dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."—Canadian Dental Association

For further information on these clinical studies, write to
Dentist Professional Services Division, P.O. Box 355, Terminal A, Toronto, Ontario

Confidence based on research=Crest

DMFS New decayed, missing, or filled surfaces. All clinical studies conducted vs. null control.
Control dentifrice was Crest without its stated actives.

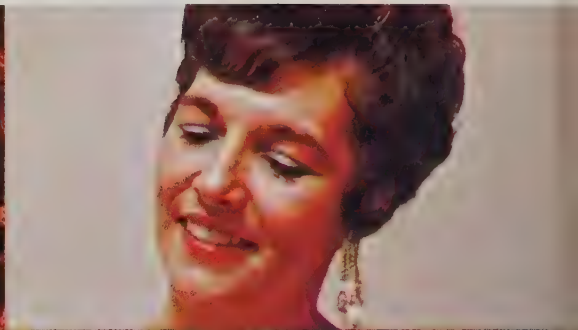
© 1973 PROCTER & GAMBLE, TORONTO

CAS-380



In the flaming glory of an autumn leaf there is a simple logic: a harmony of form, size, color and arrangement.

The Trubyte® System uses the same logic to provide the point of departure for a beautiful denture.



Trubyte® Bioblend® Anteriors...expressions of a simple, natural logic.

TRUBYTE

 Dentsply Canada, Ltd. Toronto 21B, Ontario

© 1977 Dentsply International, Inc.
All rights reserved

JOURNAL

of the Canadian Dental Association
de l'Association Dentaire Canadienne
Nov 1977/Volume 43/No 11

PUBLISHER: Canadian Dental Association
SCIENTIFIC EDITOR/R. S. Turnbull, DDS
EDITOR: Diane Charter
FRENCH SCIENTIFIC EDITOR/Robert Lambert, DDS

MANAGING EDITOR/ADVERTISING: Anna Spencer
EDITORIAL SECRETARY/Mary Maxwell
CLASSIFIED ADVERTISING/Marie Cosgrave
CIRCULATION/Cathy Cronin

ISSN 0382-8514

Regular Features

Announcements	514
Letters to the Editor	516
Les actualités dentaires	518
Dentistry in the news	523
Deaths	530

Articles

La fluoruration de l'eau — Bellemare	520
Canadian guidelines for the teaching of pain and apprehension control in dentistry — Donaldson	532
Rapidly progressing internal resorption — Ruprecht and Mang	536
CDA Council for Dental Materials and Devices Status Report: Root canal sealing materials	538

Classified Advertising	541
------------------------	-----

Advertisers' Index	544
--------------------	-----

Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1977 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454.

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association.

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1977 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22).

Veuillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences. Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise.

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Announcements/Avis

Canadian Dental Association, 1978, Winnipeg, September 10-13.

Canadian Meetings

Academy of Dentistry, Winter Clinic, Royal York Hotel, Toronto, November 24, 1977. Contact: Mrs. P. Williams, Executive Secretary, Academy of Dentistry, 234 St. George Street, Toronto, Ontario M5R 2P2.

Ontario Society for Preventive Dentistry, Toronto, December 2-3, 1977. Speaker: Dr. Emmanuel Cheraskin on nutrition and improving the health of the dental family. Contact: Dr. Hans Viergever, 70 Melvin St., Hamilton, Ontario L8H 2J5.

Alpha Omega Dental Fraternity Ladies' 9th Annual Art Show Sale and Auction, Edwards Gardens, Toronto, April 15-16, 1978. Featuring Ken Danby, Glen Loates, A. J. Casson, G. Iskowitz, R. Letendre, N. Morriseau, etc. Proceeds in aid of Dental Education. For information, contact: Mrs. P. Chapnick (416) 223-5478.

Ontario Dental Association and the Dental Society of the State of New York, Joint Convention, Sheraton Centre, Toronto, May 14-17, 1978. Contact: Mrs. W. C. Durham, 234 St. George Street, Toronto, Ontario M5R 2P2.

Les Journées Dentaires du Québec, Quebec Hilton Hotel, Quebec City, May 28-31, 1978. Contact: Dr. R. M. Lang, 5171 Decarie Blvd., Montreal, Quebec H3W 3C2.

Atlantic Provinces Dental Convention, Charlottetown, Prince Edward Island, July 2-5, 1978. Contact: Dr. David O'Connell, 13 Green Leaf Drive, Sherwood, Prince Edward Island.

Pacific Dental Federation Convention, Vancouver, July 23-26, 1978. Contact: Dr. Ken Neuman, President, Pacific Dental Federation, 1125 West 8th Avenue, Vancouver, British Columbia V6H 3N4.

International Meetings

French Dental Association, 1977 National Congress, Congress Hall, International Centre in Paris, November 23-26, 1977. Contact: Alain Deyrolle, Secretary General, French Dental Association, 19 bis, rue Legendre, 75017 Paris.

11th International Dental Trade Fair, Bella Centre, Copenhagen, Denmark, January 3-5, 1978. Contact: Royal Danish Consulate, 151 Bloor St. West, Suite 310, Toronto, Ontario M5S 1S4.

Yankee Dental Congress, Prudential Center Complex, Boston, Massachusetts, January 13-16, 1978. Contact: Massachusetts Dental Society, 36 Washington St., Wellesley Hills, Massachusetts 02181.

East Coast District Dental Society, Miami Winter Meeting, Fontainebleau Hotel, Miami Beach, January 15-18, 1978. Contact: Barbara Sims, Executive Director, East Coast District Dental Society, 2 S.E. 13th Street, Miami, Florida 33131.

8th Paulista Convention of Odontology and 10th Latin American Seminar of Odontology, Sao Paulo, Brazil, January 21-28, 1978. Contact: Dr. Edmir Matson, General Secretary, Rua Humaitá 389, Caixa Postal 2523, CEP 01321, Sao Paulo, Brazil.

Australian and New Zealand Societies of Periodontology, Combined Meeting, Melbourne, Australia, February 9-10, 1978. Contact: Dr. Lloyd G. O'Brien, 147 Collins St., Melbourne, Victoria 3000, Australia.

Australian Dental Association, Jubilee Congress, Melbourne, February 12-16, 1978. Contact: Dr. D. Behrend, Honorary Secretary, 1978 Jubilee Dental Congress, P.O. Box 29, Parkville, Victoria 3052, Australia.

Canadian American Medical Dental Association, 18th Annual Session, Vail, Colorado, February 25-March 4, 1978. Contact: Dr. H. R. Allott, Secretary Treasurer, 550 Osborn Blvd., Sault Ste. Marie, Michigan 49783.

Circulo Odontologico Del Sur (Southern Argentina Dental Society), Second International Congress and Third Socio-Economic Congress, Bahia Blanca, Argentina, May 25-28, 1978. International lecturers will deal with all clinical specialties. Contact: Dr. R. L. Ellis, Associate Professor, Department of Community Dentistry, University of Toronto, Faculty of Dentistry, 124 Edward St., Toronto M5G 1G6.

FIRST AID TO THE HEALING ARTS.



The Chairman by Pelton & Crane. More pleasing to the eye. Designed for complete relaxation, and upholstered in a special breathable fabric for extra comfort. Reversible seat cushion for longer wear. With up and down motion, plus a unique traversing capability of 14 inches. So the doctor can position the patient at the best angle for convenience and efficiency.

The Chairman. One of a group of Pelton & Crane products for effective dental practice with demonstrable advantages over others in the field. Advantages that could have great advantages for you.



Pelton & Crane
P O BOX 3664 CHARLOTTE, N C 28203

The impacted molar

There are many contentious subjects in the field of dentistry and it would be readily conceded that the third molar is a star performer. Drs. Raley, Chapnick and Baker in their article in the August, 1977, issue make statements with which I would differ on the basis of my own clinical experience — some 28 years in general practice and, additionally, part time associate at the Faculty of Dentistry, University of Toronto, these past 12 years.

"The third molars should be removed as soon as it is evident that there is no space for them."

I suggest that unerupted asymptomatic "eights" are in the same class as an asymptomatic appendix: 1) both are functionless; and, 2) either might cause problems.

The appendix, if it becomes infected (symptomatic), often constitutes a life or death situation — one does not dally with an acute perforation. I surmise it fair comment that, statistically, more appendices become "acute" than unerupted third molars. Abdominal surgeons, to my knowledge, have never suggested mass appendectomy. If I may be naughty, might I enquire of any oral surgeon who subscribes to the philosophy of "extract in case of trouble in the future" if he still has his appendix?

"Second molars should not be removed in order to permit the third molar to erupt except in special circumstances." (Fig. 4).

I do not know what the authors mean by "special circumstances". The illustration referred to as figure 4 is a type of panograph. Radiologists would agree that they are not to be taken too literally, as this form of picture is liable to considerable distortion. But figure 4 would appear to illustrate a disto-

angular impaction within the anatomical outline of the Ramus, and no clinician would suggest that the extraction of a seven could be helpful in this situation. But it seems to me that the authors are using this exceptional situation to prove a rule.

Over the years I have often removed sevens to relieve mesio-angular impactions. I know other colleagues who do the same. I have found clinically that it is a fairly successful approach. I could offer the names of at least two respected clinicians who carry out the treatment routinely for mesio-angular impactions, of a certain type and degree. Where the mesio-angular impaction is so deep that surgical extraction would seriously destroy bone distal to the sevens, as the authors state, it is the preferred line of treatment. I suggest, on the basis of my clinical experience and that of others, that removal of sevens to allow eights to erupt in certain circumstances is legitimate and successful. My feelings are that these occasions are more numerous than the authors would lead one to suspect.

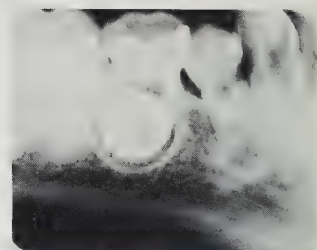
"Proliferation to a squamous cell carcinoma is also a very real threat."

Yes, sirs, and even more commonly, alas, is carcinoma of the female breast — but let us not get into the appendix type illustration again and discuss the merits of routine bilateral mastectomy.

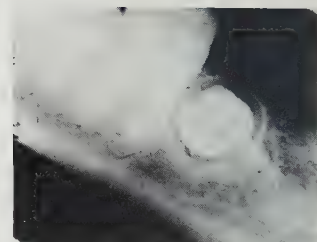
My own guide rules on eights (and please, guide, rather than rules) are that if —

- 1) clinically they are symptomatic, and/or
 - 2) can be shown to be physically connected with the oral cavity and hence liable to bacterial invasion, and/or
 - 3) show a pathological process radiographically,
- then there is a case for surgery.

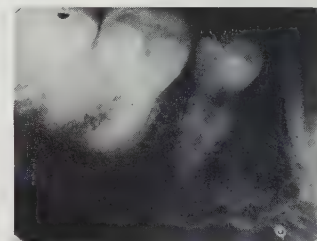
Feb '72



Sept '72



Sept '77



Mal-aligned teeth can behave in bizarre ways. A recent case illustrates a 4.5 in a seemingly "impossible" situation erupting normally without surgery or appliances. 4.4 was extracted to relieve crowding.

If, however, the teeth are asymptomatic then perhaps radiographs every third or fourth year (to confirm the status quo) may be justifiable. And that need be the total treatment.

When we are daily witnessing transplants of kidneys, implants of plastic heart valves and metal pins for fractured femurs, etc., why get excited about a patient's very own unerupted tooth? I suggest an overall sense of clinical proportion and that the dental profession not make too much to do about nothing.

M. M. Keen, BDS, LDS
Associate, Department of
Oral Medicine and Pathology,
Faculty of Dentistry
University of Toronto.

The above views are personal and not to be taken as departmental policy.

Chrono-matic system I burnout furnace

Versatile nonpolluting
burnout system. The
perfect companion
to the vacuum
pressure
casting
ma-
chine

FAST: one half hour to 700°C/1300°F, less
than one hour to 1050°C/1920°F of accurately
monitored heat

VERSATILE: for wax elimination, preheating, annealing
and tempering

NON-POLLUTING: odor free adjustable power exhaust optional



UNIQUE: drop door design
opens into a heavy duty work
surface

ECONOMICAL: less than 1-1/2
square foot of work surface and
standard 115 volt power supply re-
quired

ACCURATE AND SAFE: Modern
electronic circuits. Automatically switches
off when door is left open

RUGGED CONSTRUCTION: durable
front and drop door sheathed in stainless steel

Available only through your Dealer

designers and manufacturers of products for finer dentistry



WHALEDENT International
Division of IPCO Hospital Supply Corp.

236 fifth avenue, new york, n.y., 10001

Demonstrated at all major conventions

L'ASSOCIATION DENTAIRE CANADIENNE REVISE SES REGIMES D'ASSURANCE

Primes inférieures, couvertures plus efficaces et procédures simplifiées, voici les principales modifications portées au régime d'assurance national et provincial de l'ADC qui sera proposé aux dentistes canadiens d'ici quelques semaines.

Les Régimes de service dentaire Inc., qui gèrent le régime pour l'ADC, ont annoncé les modifications suivantes:

1. La majorité des primes ont fait l'objet d'une diminution;
2. Les assurés pourront obtenir des couvertures plus élevées;
3. Les dispositions contractuelles seront plus avantageuses. Il y aura notamment une nouvelle définition de "mutilation" ainsi qu'une augmentation de la compensation obtenue pour la perte de l'usage du pouce ou de l'index, qui satisferont les besoins spécifiques des dentistes.
4. Aucun contact direct par des agents ou courtiers d'assurance.
5. Les régimes seront gérés au moyen de procédures administratives simplifiées.

Il y aura, par exemple, une définition unique énumérant tous les détails de couverture. Les assurés pourront payer toutes leurs primes par des versements trimestriels ou annuels.

Une considérable campagne d'information a été lancée par l'ADC et les associations provinciales afin que tous les dentistes puissent profiter à temps des nouveaux régimes; cette campagne comprend une série de réunions d'information qui seront tenues dans tout le Canada au cours du mois de novembre; les dentistes pourront alors poser les questions et obtenir les réponses qui les concernent personnellement.

Il y aura, de plus, dans tout le pays, des services consultatifs, d'information et d'assistance pour les demandes d'indemnités.

Le nouveau régime a été conçu à la suite de longs mois de recherches et de discussions au sein de la profession, par les associations nationales et provinciales et le Conseil d'assurance de l'ADC, afin d'établir des régimes qui conviennent spécifiquement aux dentistes. Suivant l'élaboration du projet, 49 compagnies d'assurance ont soumis leurs taux

et prix. La sélection a été faite sur la base des taux et conditions les plus favorables.

Le nouveau programme couvrira les domaines suivants:

1. Assurance-vie; revenus pour les survivants qui étaient à charge.
2. Assurance-invalidité, garantissant un revenu qui couvre les frais de subsistance et les frais généraux de bureau, pour incapacité en cas de maladie ou de blessures.
3. Assurance garantissant la propriété et les revenus; assure le dentiste en cas de perte de revenus, ou de dommages à l'équipement ou au mobilier de son cabinet dentaire.
4. Responsabilité et négligence professionnelle, en cas de dommages causés à une autre personne ou à des biens.

Nous désirons faire part aux dentistes que d'ici quelques semaines, ils recevront divers avis concernant ce programme. Afin de ne pas laisser leur assurance tomber en déchéance après le 1er janvier 1978, ils devront individuellement prendre leurs dispositions à cet égard.

L'ADC FAIT OFFICIELLEMENT APPEL AU GOUVERNEMENT AFIN QU'IL SUPPRIME LES DROITS DE DOUANE SUR LES LAMPES DENTAIRE

L'Association dentaire canadienne a officiellement fait appel au gouvernement fédéral afin que celui-ci supprime les droits de douane sur les lampes dentaires. L'ADC affirme que les lampes dentaires sont des instruments de diagnostic et, à ce titre, ne devraient faire l'objet d'aucun droit.

Dans un mémoire adressé au Directeur de la Division des douanes et accise, Revenu Canada, l'ADC résume ainsi son attitude:

"Le diagnostic de maladies dentaires s'effectue à l'aide d'un examen visuel de toutes les surfaces visibles des dents au moyen d'un miroir et d'une sonde. A cette fin, une lampe, corrigée pour la couleur, d'intensité et de forme appropriées pour éclairer convenablement la bouche, constitue une partie essentielle de la série d'instruments de diagnostic du dentiste.

"Sans une telle lumière, il est impossible de déceler la coloration anor-

male et les fissures qui indiquent la présence de carie. Les lésions buccales, souvent signes précurseurs du cancer, ne seront pas non plus diagnostiquées.

"La radiographie, la sonde, le miroir et la lampe constituent l'équipement du dentiste et voilà pourquoi l'Association dentaire canadienne invite respectueusement la Division des douanes et accise à reconsidérer l'application et l'usage faits de la lampe de bouche dans le contexte de son emploi à titre d'instrument de diagnostic."

De belles couleurs naturelles de dents
pour la plupart des restaurations.

Le choix de teintes Trubyte Bioform.



Avez-vous réalisé que vous pourriez utiliser votre Guide de Teintes Bioform pour à peu près toutes les restaurations prothodontiques fixes et amovibles?

N'est-ce pas pratique? . . . et si précis en même temps.

N'oubliez pas de prescrire les produits de qualité Dentsply qui ont été fabriqués spécialement pour aller avec votre guide de teintes . . .

Les dents **TRUBYTE BIOFORM** en porcelaine et en plastique
pour des prothèses complètes et partielles.

La porcelaine **BIOBOND**® pour les couronnes et ponts.

La porcelaine à l'alumine **TRUBYTE BIOFORM** pour les couronnes.

CAULK® **BIOLON**® pour facettes de plastique.

Si vous ne possédez pas encore l'un des quelque 70,000 mille guides de teintes Trubyte Bioform actuellement utilisés, vous pouvez en obtenir un chez votre distributeur Dentsply.

TRUBYTE®

Dentsply Canada, Ltd. Toronto 2-B, Ontario
Tous droits réservés.

LA FLUORURATION DE L'EAU

Dr. Michel Bellemare
Chef de la fluoruration au Ministère
des Affaires Sociales
Gouvernement du Québec

Mardi, le 24 mai, le Dr. Michel Bellemare était conférencier à l'Ecole de Médecine Dentaire de l'Université Laval. Chef de la fluoruration au Ministère des Affaires Sociales, le Dr. Bellemare a surtout porté attention, au cours de cette rencontre, sur certains aspects techniques de la question. Un résumé est présenté aux lecteurs du Journal.

Il suffit de mentionner que la fluoruration de l'eau est observée depuis 75 ans dans certaines régions du monde.

La fluoruration est pratiquée aux Etats-Unis depuis une trentaine d'années.

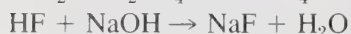
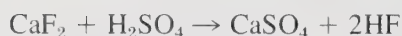
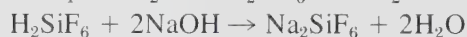
Aucun cas de dommage à la santé générale n'a été enregistré parmi les habitants qui ont déjà bénéficié de cette mesure.

La ville de Toronto est fluorurée depuis 1963.

Fluorure utilisé:



Préparation des fluorures: Na_2SiF_6 et H_2SiF_6



Principaux points de la section IV de la loi de la protection de la santé publique sanctionnée le 27 juin 1975.

- 1) La teneur naturelle en fluorure des eaux destinées à la consommation humaine et fournies par les usines de filtration doit être déterminée.
- 2) Lorsque cette teneur est inférieure à 1.2 ppm, la propriétaire de l'usine doit y joindre un appareil de fluoruration et l'opérer régulièrement de façon à ce que les eaux fournies aient une teneur en fluorure de 1.2 parties par million.

- 3) Le propriétaire de l'usine doit aviser le ministre au moins six semaines avant l'installation d'un système de fluoruration.
- 4) Le système de fluoruration ne peut être mis en opération avant qu'une personne déléguée par le ministre ait délivré un certificat à l'effet que l'installation est adéquate.
- 5) Le ministre est autorisé à verser à tout propriétaire d'une usine de filtration une subvention égale à la totalité du coût d'achat et d'installation d'un appareil de fluoruration.

Les fluorures se dissolvent complètement dans l'eau.

TROIS TYPES DE DISTRIBUTEUR

1) Distributeur à sec

Fluorure: hexafluorosilicate de sodium (Na_2SiF_6)

Avantage: faible coût d'opération.

Inconvénient: manipulation des fluorures.

Utilisation: usines de filtration de capacité moyenne.
(10 MGD $\rightarrow$ capacité $\rightarrow$ 1 MGD)

2) Saturateur

Fluorure: fluorure de sodium (NaF)

Avantage: manipulation réduite des fluorures et facilité d'opération.

Inconvénient: nettoyage périodique du lit de gravier.

Utilisation: usine de filtration de faible capacité.
(inférieure à 1 MGD)

Réservoir de 45 gallons avec entonnoir renversé.

3) Distributeur de liquide

Fluorure: acide hexafluorosilicique.

Avantage: aucune manipulation des fluorures.

Inconvénient: possibilité de fuite d'acide.

Utilisation: usine de filtration de moyenne à grande capacité.
(supérieure à 1 MGD)

Système très simple.

Il est important de pouvoir déterminer la fluoruration effectuée de façon adéquate dans les usines.

MECANISMES DE CONTROLE DE LA TENEUR EN FLUORURE

1) Contrôle analytique à l'usine

Description: sections 2.4 et 2.4.1 à 2.4.5 inclusivement des normes et directives.
But: déterminer si la fluoruration de l'eau s'effectue dans des conditions optimales.
Fréquence: aux quatre heures à la sortie de l'usine et une fois par jour sur le réseau de distribution.
Enregistrement: toutes les déterminations analytiques doivent être notées dans un registre. La moyenne des déterminations quotidiennes doit être inscrite sur le formulaire "Contrôle de la fluoration".

2) Contrôle de la qualité à partir d'échantillons concentrations données.

Description: section 2.4.6 et 2.4.6.1 des normes et directives.
But: permettre aux chimistes du ministère des Affaires Sociales de juger de la qualité des analyses produites par un organisme donné, signaler et corriger une situation anormale.
Fréquence: une fois par mois.
Enregistrement: les résultats doivent être expédiés au ministère des Affaires Sociales dans les 48 heures suivant la réception des échantillons.

3) Contrôle de la qualité à partir d'échantillons provenant des réseaux de distribution de chacune des usines.

Description: section 2.4.6.2 des normes et directives.
But: permettre aux chimistes de juger de la validité des rapports mensuels "contrôle de la fluoruration" et déceler toute anomalie inhérente aux réseaux de distribution.
Fréquence: une fois par semaine.
Enregistrement: ces déterminations sont notées dans un registre.

4) Contrôle de la qualité des fluorures utilisés.

Description: section 1.2.3 des normes et directives.
But: vérifier si le produit répond aux critères de qualité approuvés par le ministère des Affaires Sociales.
Fréquence: à chaque livraison de fluorures.
Enregistrement: les chimistes produisent un rapport analytique basé sur les critères de qualité approuvés par le ministère des Affaires Sociales.
Ces quatre mécanismes sont appliqués depuis le 1er mai 1977.

L'eau fluorurée, c'est l'eau à laquelle on a ajouté des fluorures. Les fluorures, composés de fluor, sont des substances à propriétés préventives que l'on trouve dans l'eau, la terre, les plantes, les fruits et les légumes à l'état naturel.

Au Québec, seulement quelques villes et villages bénéficient d'une eau potable naturellement fluorurée.

La teneur en fluorures des eaux du Québec doit correspondre à un peu plus d'un gallon (1.2) de fluorures pour un million de gallons d'eau.

CONCLUSION

Les fluorures ajoutés à l'eau améliorent aussi la santé dentaire des adultes. Des études comparatives américaines le prouvent. Ainsi, des individus vivant dans une région à forte teneur naturelle en fluorures, dont l'âge varie entre 20 et 65 ans présentaient moins de dents cariées, absentes ou obturées dans une proportion de 25 à 60 pour cent.

QUESTION:

Quel est le nombre d'usines qui ont un système de fluoruration?

Depuis le 1er janvier 1977, 134 usines sont obligées. Quinze usines sont en opération regroupant 800,000 habitants.



Tools of the Trade

Colgate's Special MFP Fluoride provides continuing protection against cavities between check-ups.

The fluoride treatment you give gets your patients off to a good start. But it's important that they brush with an effective fluoride toothpaste, like Colgate,* so they're fighting cavities between check-ups too.

Our clinical tests show that the regular use of Colgate with MFP fluoride alone significantly reduces the number of new cavities. Used in conjunction with your topical fluoride application,

it follows that there should be an even greater reduction of cavities.

How does Colgate's special fluoride MFP fight decay? We believe that MFP* (sodium monofluorophosphate) is effective in converting the surface layer of apatite (calcium hydroxyphosphate) into fluorapatite (a calcium fluorophosphate) thus making the tooth more resistant to decay.

Colgate's MFP is stable. Even after

three years the sodium monofluorophosphate is still present and able to react with tooth enamel.

And it's reassuring to know that staining of teeth, a problem associated with some dentifrices is not a problem with Colgate's MFP.

You might remind your patients how important it is to back-up your fluoride protection...with the kind that Colgate's special MFP fluoride provides.



"Colgate has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied programme of hygiene and regular professional care."

*TM

Canadian Dental Association

Colgate-Palmolive Company



Dr. R. L. Moran

DR. ROD MORAN NAMED CDA PRESIDENT-ELECT

Dr. R. L. Moran, well-known Toronto dentist, was elected president-elect of the Canadian Dental Association during the CDA Board of Governors meeting held in Ottawa in September. He will don the CDA president's chain of office at the conclusion of the 1978 annual meeting in Winnipeg.

Born in Port Arthur, Ontario, Dr. Moran received his DDS from the University of Toronto's Faculty of Dentistry in 1961. He served with the Royal Canadian Dental Corps from 1961 to 1965 and proceeded on to graduate studies at the University of Toronto where he was awarded his diploma in paedodontics in 1967. He received his specialist certificate in paedodontics from the Royal College of Dental Surgeons of Ontario that same year.

Also in 1967, Dr. Moran took up his present position as Director of Dentistry at the Ontario Crippled Children's Centre in Toronto. He

served as consultant in paedodontics at the Hospital for Sick Children and is presently clinical assistant in the Hospital's Department of Dentistry, and consultant in paedodontics at the North York General Hospital. In addition, he is associate in dentistry, paedodontic graduate section, University of Toronto Faculty of Dentistry.

Dr. Moran has served, and continues to serve, organized dentistry in many capacities. His appointments include the following: member of Council, Toronto Academy of Dentistry; a past president of the Ontario Dental Association; founding chairman, University of Toronto Student Health Organization, Dental Division; chairman, Organizing Committee Demonstration Model Project (Ontario Government DM86); member of the Medical Advisory Committee, Ontario Crippled Children's Centre; member of the Professional Advisory Committee, Ontario Society for Crippled Children; member

of the Task Force on the Provision of Dental Care for Handicapped and Retarded Persons; and, panel member on the Ontario Government Task Force on Handicapped Children. Dr. Moran is a Fellow of the Royal College of Dentists of Canada and has served on the Executive of the Canadian Dental Association since 1975. He has presented numerous papers on dentistry for children and on dentistry for the disabled.

In addition to his membership in the Royal College of Dentists of Canada and the Canadian and Ontario Dental Associations, Dr. Moran is currently an active member of the following organizations: the Toronto Academy of Dentistry; the American Association of Dentistry for the Handicapped; the Canadian Academy of Paedodontics; the Ontario Society of Paedodontists; the Canadian Society of Dentistry for Children; and, the Omicron Kappa Upsilon Honour Dental Society.

NEW YORK CONSUMER GROUPS SEEK DATA ON DENTAL PRACTICE

Consumer groups in New York have undertaken a new approach to obtaining consumer information about dental practices — legislation.

The consumer organizations are seeking legislation that would compel New York dentists to file consumer-oriented information about their prac-

tices, including fee information, with the state dental board as part of their biennial re-registration. This is the first time consumer groups have sponsored legislation requiring a state to collect consumer information on dental practices.

In a legislative memorandum oppos-

ing the bill, the Dental Society of the State of New York declared: "this legislation unnecessarily complicates the proper function of the licensing and registration procedures, since it involves inordinate cost and since it duplicates information presently available."

Here are nine you should a part of your



New 3rd Edition!

OPERATIVE DENTISTRY

An extremely thorough revision, this new 3rd edition offers you a complete and up-to-date look at operative dentistry in one practical source. Nearly 300 new line drawings illustrate current operative techniques and advanced methods for preventing and treating defects in the enamel and dentin.

By H. William Gilmore, D.D.S., M.S.D.; Melvin R. Lund, D.M.D., M.S.; Colonel David J. Bales, D.D.S., M.S.D.; and James Verneti, D.D.S. June, 1977. 380 pages plus FM I-X, 7" x 10", 732 illustrations. Price \$24.70.

New 2nd Edition!

ATLAS OF ORTHODONTIC PRINCIPLES

This new 2nd edition examines the three stages of dental development, describes various aberrations, and offers appropriate treatment suggestions. You'll find expanded discussions on such key topics as temporomandibular joints and musculature, occlusions, working relationships of the teeth, and the craniofacial complex.

By Raymond C. Thurow, B.S., D.D.S., F.A.C.D. September, 1977. 420 pages plus FM I-VIII, 8½" x 11", 432 illustrations. Price \$36.25.

good reasons make Mosby dental team:

for your staff:

New 4th Edition!

THE DENTIST AND THE ASSISTANT

This well known book provides your staff with an up-to-date understanding of all the operations of an efficient dental office — from tray setups and chairside assisting to patient contact and public relations. Completely new chapters in this edition discuss: ethics and jurisprudence; understanding the chewing mechanism; and patient education.

Edited by Shailer Peterson, B.A., M.A., Ph.D., F.A.C.D., F.I.C.D.; with 23 contributors. October, 1977. Approx. 480 pages, 7" × 10", 362 illustrations. About \$15.75.

New 5th Edition!

ORAL DIAGNOSIS

Your staff will benefit from the diagnostic insights they'll gain from this highly-acclaimed reference. Reorganized and updated, this new edition follows a sequence that corresponds perfectly with the clinical situation — from patient overview to formulation of the treatment plan. Excellent illustrations include color plates depicting primary and secondary lesions.

By Donald A. Kerr, D.D.S., M.S.; Major M. Ash, Jr., D.D.S., M.S.; and H. Dean Millard, D.D.S., M.S. January, 1978. Approx. 448 pages, 7" × 10", 469 illustrations. About \$19.45.

A New Book!

ANATOMY OF OROFACIAL STRUCTURES

This new reference is the first to combine thorough discussions of dental anatomy, head and neck anatomy, and histology and embryology in one convenient resource. Throughout, material is well written and organized. New words are underlined, listed at the end of the chapter, and further defined in the book's glossary. Behavioral objectives introduce each chapter and all chapters conclude with review questions.

By Richard W. Brand, B.S., D.D.S., F.A.C.D. and Donald E. Isselhard, B.S., D.D.S. November, 1977. Approx. 384 pages, 7" × 10", 558 illustrations. About \$15.25.

New 5th Edition!

INTRODUCTION TO PERIODONTICS

This popular periodontic reference examines all aspects of the field — causes of periodontal disease, recognition of disease states, prevention and management. In this new edition, completely rewritten discussions examine: the nature of periodontal disease; value of radiology in diagnosis; rationale and prognosis; and management of suprabony pockets. Other new features include chapters on management of the systemically ill periodontal patient and health maintenance of the periodontally treated individual.

By Henry M. Goldman, D.M.D. and D. Walter Cohen, D.D.S.; with 6 contributors. November, 1977. Approx. 496 pages, 4 7/8" × 7 5/8", 474 illustrations. About \$15.70.

A New Book!

OFFICE PROCEDURES FOR THE DENTAL TEAM

A complete guide to all secretarial/bookkeeping procedures encountered in the dental office, this new book includes practical information that can be immediately applied in any office situation. Among the specific topics examined are: working with dental forms (including insurance forms); telephone techniques; recall systems; banking procedures; and letter writing.

By Betty A. Ladley, C.D.A., B.S., M.S. and Jerry C. Patt, B.S. November, 1977. 310 pages plus FM I-XVI, 7 1/4" × 10 1/2", 233 illustrations. Price, \$13.15.

New 2nd Edition!

MINOR TOOTH MOVEMENT IN CHILDREN

The well-organized, step-by-step format of this new 2nd edition provides you with a clear, practical approach to interceptive orthodontics. In three effective parts, it examines theory and diagnosis; treatment planning; and appliance therapy. Two new chapters discuss: simplified cephalometrics; and welding and soldering orthodontic appliances.

By Joseph M. Sim, B.S., D.D.S., M.S.D., F.A.A.P., F.A.C.D. December, 1977. Approx. 480 pages, 7" × 10", 881 illustrations. About \$34.15.

New Volume VI!

CURRENT THERAPY IN DENTISTRY

Keep pace with recent developments in all major areas of dental science with the newest volume in this time-honored series. Four sections offer you up-to-date answers to contemporary questions on: oral medicine; restorative dentistry; oral surgery; and pedodontics. In each area, a specialist provides practical advice — describing simple yet effective solutions derived from his own professional experience. The result is a compendium of problems with answers — a useful guide in your own practice.

Edited by Henry M. Goldman, D.M.D., F.A.C.D., F.I.C.D.; H. William Gilmore, D.D.S., M.S.D.; William B. Irby, D.D.S., M.S.; and Ralph E. McDonald, D.D.S., M.S. September, 1977. 618 pages plus FMI-XVI, 7" × 10", 893 illustrations. Price, \$41.50.

MOSBY

TIMES MIRROR

THE C. V. MOSBY COMPANY, LTD.
86 NORTHLINE ROAD
TORONTO, ONTARIO
M4B 3E5

DENTISTS URGED TO PARTICIPATE IN CDA ACTIVITIES

Membership in the Canadian Dental Association continues to increase, strengthening the position of the Association and facilitating an increase in the services and benefits it offers to members of the dental profession. "There are many valid, substantial reasons to support membership in CDA," says Dr. Lindsay Mussells, chairman of the membership committee and a CDA Past-President.

Issues of paramount importance to the dental profession now demand constant attention from the Association's executive. The Association is pledged to meet the challenges that will arise in the months ahead and to ensure the dental profession is perceived as a responsible body of professionals, speaking with authority and responsibility at the national level. Through the concerted efforts of all of its members, CDA intends to maintain liaison with federal government sources and provincial associations in order to protect the interests of its membership and the dental profession.

Government Liaison

The climate relating to political concerns makes it evident that government intervention in the affairs of professional associations will not abate. Wishful thinking will not change the desire of legislators to scrutinize the conduct of organizations such as the Canadian Dental Association.

"Because of current government attitudes, it is imperative that our Association maintain, and further develop, its contact with both elected representatives and public servants," commented President Dr. Donald Rife.

In recent months negotiations have taken place in some provinces that indicate dramatic changes may be made in connection with the performance of dental services and the status of the profession. CDA is committed to keeping in touch with developments as they occur and to act swiftly in passing on such information to its membership in all parts of Canada.

As well, CDA will liaise with its membership throughout Canada to ensure that views are heard and considered in dealings with government.

The Association recognizes the complexity of maintaining contact with a number of sources at the federal level in Ottawa. It is a role that requires perseverance and patience, and the co-operation of its membership. But it is only as a united and strong body that the Association can press ahead with significant national issues that affect the profession.

"Members of the dental profession in Canada who want to see their profession maintain its rightful role as a respected and influential body have a duty and an obligation to themselves to participate in the activities and affairs of CDA," Dr. Mussells explained. "Membership brings the privilege of participation, and it also strengthens the efforts of those who share the common concern for the profession, its status and its future. If you are not a member, CDA needs you. And you need CDA."

Scope of CDA Activities

It is not only CDA's involvement on behalf of its members in regard to government liaison that illustrates the Association's scope of activities and the benefits that accrue to its members.

Significantly, CDA carries on a high level of cooperation with provincial associations, while, at the same time, it ensures that each body retains its individual responsibilities in well-defined areas.

The Association recognizes that the profession must reserve the rights of its members to act as a self-governing body. The dental profession must hold fast to its rights to: set standards for the performance of dental services in Canada; establish a fair rate of remuneration for dental services; and participate in drafting health care legislation.

"The more widely representative the Association is, the better its ability to function and to carry out its mandate,"

Dr. Rife said. "Your membership and participation in CDA is essential."

Insurance Plan

Membership in CDA brings a range of benefits. Members soon will benefit from a new and redesigned insurance program. Major improvements have been announced; the plan provided through CDSPI will offer substantial benefits including more options, reduction of limitations, premium stabilization and open enrolment.

The CDA plan is available only to members through the national Association and provincial associations. CDSPI is charged with the responsibility of developing programs that bring the best advantages to the profession at the lowest possible price. The new program, which takes effect January 1978, will feature significantly lower premiums for most forms of insurance. Many new provisions have been incorporated into it, and maximum limits increased; assistance will be available on advice and claims in major cities across Canada. CDA members are being notified of full details on the new program.

CDA also offers retirement savings programs, and changes to improve the plan are under consideration at the present time.

Requirements for Membership

For those members of the profession considering membership in CDA, it should be noted that membership in a provincial association is necessary in order to stand for office in the Association, to vote in elections or be a committee member. Dentists, however, may join the association directly as non-voting members without enrolling in a provincial association, if the member is retired from practice or is a member in good standing of another national dental association.

Taxation Committee

Recent activities undertaken by CDA include the establishment of a com-

Caulk[®] Dycal[®]

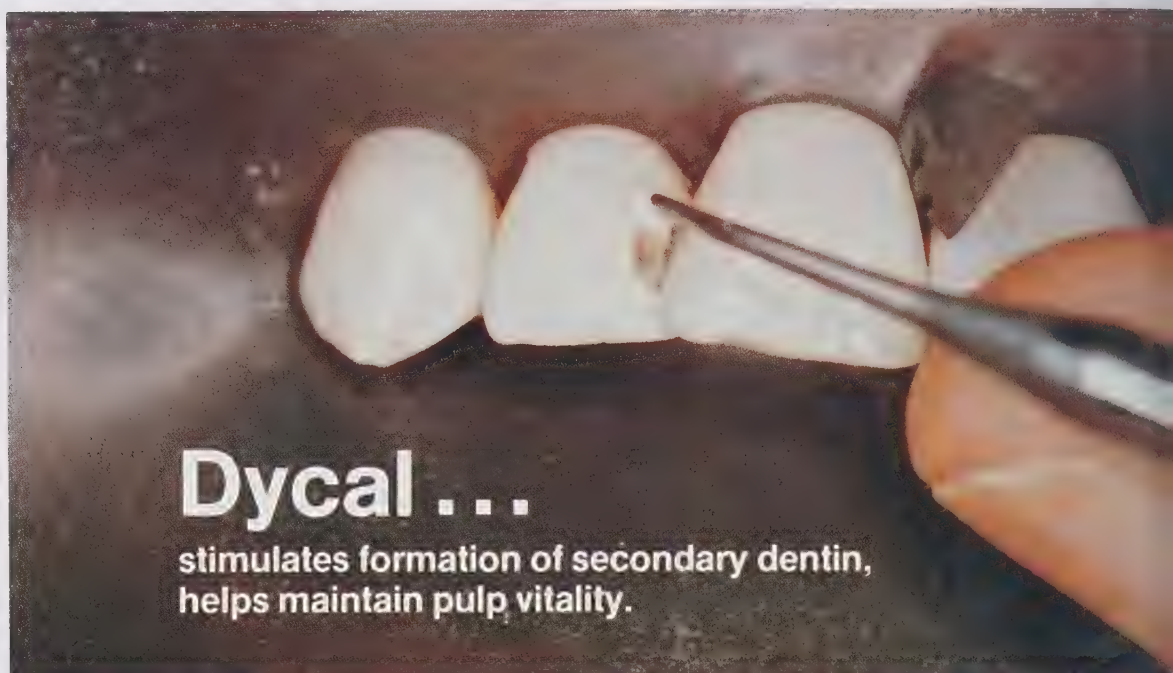
protective base,
pulp cap

Calcium hydroxide
in convenient form and
clinically effective.



527

For more
information
check number 101



Dycal . . .

stimulates formation of secondary dentin,
helps maintain pulp vitality.

- Stays where you put it.
 - Sets hard fast for placement of restorative material or intermediary base.
 - Provides a rigid protective base under amalgam, composite, silicate or resin restorations.
 - Safe to place in cases of exposure or near exposure.
 - Radiopaque—there's little chance of ever mistaking it for caries.
- DYCAL—basic in your operatory.

Caulk making life
a little easier
for dentists

Division of Dentsply International Inc.



For more
information
check number 101

©1975 Dentsply International Inc. All rights reserved.

Printed in U.S.A.

Dentists urged . . .

Continued from facing page

mittee to study matters relating to taxation. The committee is investigating methods to obtain tax relief for dentists in various areas such as taxes imposed on equipment or materials. The results of the efforts of this committee, made up of Dr. Clyde Covit, Quebec; Dr. Robert Hicks, B.C.; and John Gillies, Executive Director of ODA, are already proving highly satisfactory in that the former federal sales tax of 12% applied to equipment used in the production of artificial teeth has been lifted.

The committee intends to pursue its efforts in this area and to provide further benefits to the profession and its members. It is now studying taxation requirements that relate to incorporation and to circumstances applied to the designation regarding the category "small business".

Additional Benefits

CDA is a resource centre for its members across Canada. Membership brings with it the availability of fluoridation information kits and pamphlets; access to public education pamphlets and films; information on dentistry and auxiliary careers including data on approved schools, dental aptitude test information pamphlets and films, and details about continuing education courses and conventions.

CDA has a long and respected history. "Many of its members have served the profession well in their efforts to enhance the status of the profession. Canadian dentists who support the national organization and its activities contribute much to the well-being of the entire profession," Dr. Rife added.

For further information on membership contact:

The Canadian Dental Association

**1815 Alta Vista Drive
Ottawa, Ontario**

K1G 3Y6

Telephone: (613) 523-1770

NEW PRESIDENT OF B.C. COLLEGE

Dr. Donald E. MacFarlane of Vancouver is the newly-elected president of the College of Dental Surgeons of British Columbia.

Dr. MacFarlane received his B.A. from the University of British Columbia in 1962 and his D.M.D. from the University of Manitoba in 1966. He has operated a private practice in Vancouver since 1967 and, from 1971 to 1976 was a part-time staff member of the departments of pathology and periodontology in U.B.C.'s Faculty of Dentistry.

Dr. MacFarlane is very active in organized dentistry. He has served as: chairman of the Education Committee for the B.C. College, a member of the College Task Force on Children's Dental Care; a member of the Children's Dental Care Research Project; a member-at-large of the Council of the College; and, a member of the Canadian Dental Association's Council on



Dr. D. E. MacFarlane

Health Care. He is presently also a member of the Vancouver and District Dental Society.

ULTRA-VIOLET CAMERA DETECTS TOOTH DECAY BEFORE IT BECOMES VISIBLE

A dental researcher has developed an ultra-violet camera that can detect tooth decay two years before it becomes visible.

The camera was developed by Dr. Israel Kleinberg, formerly of the University of Manitoba and now chairman of the oral biology and pathology department at the State University at Stonybrook, New York, according to Dr. John Gwinnett, an associate professor in the department. Dr. Gwinnett, formerly a dental researcher at the University of Western Ontario, said the ultra-violet camera can spot tooth decay at such an early stage that measures to reverse the decay process can be taken.

Dr. Gwinnett was in London, Ontario, to discuss the camera at a conference of the International Association for Dental Research.

Work on the camera is still experimental, he said, but it has already been shown that it can detect dental plaque which is left behind even after careful cleaning by a dental hygienist. He said the plaque is deposited in predictable patterns, "almost like a fingerprint" for an individual.

The ultra-violet camera would not replace x-ray photography, which must still be used to examine areas the camera cannot see, but it could find areas of early decay and locate potential disease-producing organisms.

Early decay areas can be treated with concentrated toothpaste or fluoride while the ultra-violet technique can also be used to show patients whether the way they clean their teeth is successful, Dr. Gwinnett explained.

MONTREAL DENTAL SOCIETY

The Montreal Dental Society recently announced its executive council for the 1977-78 term of office. Members are: Dr. Michelin Blain, president; Dr. Laval Couture, president-elect; Dr. Yvon Desmarais, vice-president; Dr. Pierre Gascon, treasurer; Dr. Richard Taché, secretary; Dr. Michel Plamon-

don, assistant treasurer; Dr. Jean-Guy Lahaie, assistant secretary; Dr. Marcel Labelle, bulletin editor; Dr. Michel Jahjah, advisor; and, Drs. Clément Rivest, Gilles Bélisle, Pierre Caty, Emmanuel Steverman and Jean Beauchemin, counsellors.

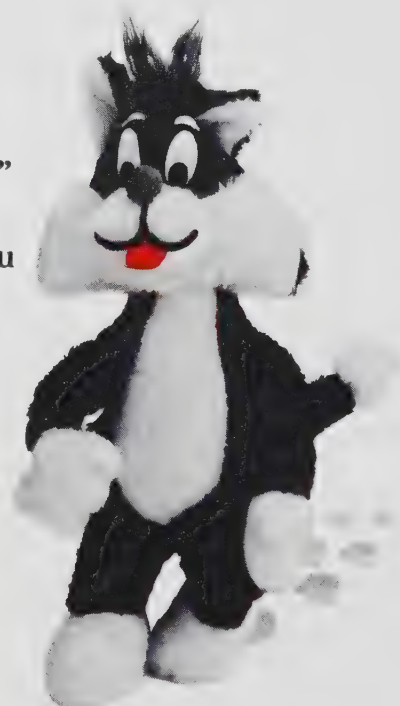
TRACK RECORD

Still getting the old "Slow Delivery" and "Back Ordered" run around from your dental supplier? These days the smart money is on snappy service suppliers like Denco, with an impressive track record for fast turnaround of needed products. Thanks to the increased efficiency of Denco's communication, stock control and delivery systems, your order can be placed and on its way the same day . . . that goes for the specials too.

Last year, Denco processed more than 11,000 special orders for dentists across Canada. This year, we've added 300 of those "specials" to our regular line.

When it comes to helping you keep your practice running smoothly . . . Denco doesn't pussy-foot around.

DENCO



Deaths

Ablack, John Lennox, 56. Ottawa, Ontario. McGill University, 1947. 23-10-77.

Huculak, Nick, 56. Vancouver, British Columbia. University of Alberta, 1941. 10-77.

McKenty, Mark Vincent, 92. Winnipeg, Manitoba. Chicago College of Dentistry, 1908. 9-10-77.

Mongeau, Ernest Alphonse, 59. Outremont, Quebec. McGill University, 1943. 10-77.

Qualley, Eric, 72. Duncan, British Columbia. University of Alberta. 9-10-77. Survived by Susan (daughter), Eric and Stewart (sons).

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association Retirement Savings Plan stood as follows on September 30, 1977:

<i>Common Stock Fund</i>	\$27.887
<i>Fixed Income Fund</i>	\$20.123
<i>Guaranteed Fund</i>	\$13.998

Total assets (market value) of the plan were \$25,913,638.16.

For further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ontario M5R 2P2.

Régime d'épargne retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 30 septembre, 1977:

<i>Fonds d'actions ordinaires</i>	\$27.887
<i>Fonds a revenu fixe</i>	\$20.123
<i>Fonds avec garantie</i>	\$13.998

L'avoir total (valeur marchande) du régime se montait à \$25,913,638.16.

Pour de plus amples renseignements, veuillez écrire à CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ontario M5R 2P2.

Concentricity: The key to cutting accuracy.



**You're
looking
at it.**

The photograph shows a Dentsply™ GULL WING™ Handpiece at full running speed, with a 12mm diamond in the chuck. Magnified over three times.

Note the shadow. If there were any appreciable wobble or run out, you'd see a larger, fuzzier shadow because the bur actually made about *200 revolutions while the camera lens was open and the film was being exposed!**

This is concentricity. In fact, of all the GULL WING Handpieces tested, the maximum run out on any handpiece was .003".

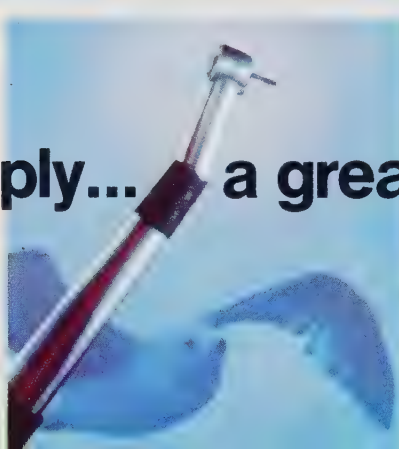
And *this* means precision cutting and control.

Tell your dealer you want a GULL WING Handpiece demonstration.

**DENTSPLY™
Equipment**

 Dentsply International, Inc., York, PA 17405

© 1977 Dentsply International, Inc.
All rights reserved.



**From Dentsply... a great new handpiece called
the GULL WING.™**

*The film was exposed for 1/30 of a second. At a speed of 420,000 rpm, the GULL WING turbine and diamond made over 200 revolutions in the tiny fraction of a second the camera lens was open.

CANADIAN GUIDELINES FOR THE TEACHING OF PAIN AND APPREHENSION CONTROL IN DENTISTRY

D. Donaldson, BDS, FDS, RCS, MDS
Vancouver

This article reports on a survey carried out in Canadian dental schools in 1972 and 1976 on the scope of teaching sedation techniques. The guidelines of the Council on Education of the Canadian Dental Association and the Education Committee of the Association of Canadian Faculties of Dentistry in relation to the teaching of pain and anxiety control are outlined.

Pain or apprehension control has advanced in dentistry over the last 20 years. Although local anaesthesia controls most painful dental procedures, fear has remained the main factor preventing a large proportion of the populace from seeking routine dental treatment. The recognition of the problem, and the introduction of new techniques and new drugs now allow control of this fear.

Oral medication has been the main method of dental sedation, however, the unpredictability of most oral drugs has made necessary a more accurate and effective modality. Nitrous oxide, introduced as a general anaesthetic over one hundred years ago can be used solely as a sedative agent. The modern "analgesic" machines are so much more reliable and accurate than their earlier counterparts that nitrous oxide can now be administered at an appropriate level safely and pleasantly to the dental patient.

Intravenous sedation should not be intravenous general anaesthesia. In 1961 Jorgensen and Leffingwell¹ published a description of their intravenous technique, intended to produce sedation in the conscious patient. Sodium pentobarbital is first titrated against the patient to produce the required level of narcosis, followed by meperidine hydrochloride for analgesia and scopolamine for its anti-emetic and anti-sialogogue effect. This sedation drug dosage met the needs of the individual patient and avoided the dangers of overdosage or underdosage which may occur when using empirical formulas for oral sedatives. A simpler intravenous sedation technique was made possible by the synthesis of diazepam in 1961 by Sternbach and Reeder.² First described in dentistry by Davidau³ in 1967, the technique was then refined by Brown, Main and Lawson⁴ in 1968; diazepam probably supercedes the Jorgensen technique since only one

drug is used and clinical recovery is more rapid. In recent years, various combinations of intravenous drugs with their own particular advantages and disadvantages have been advocated but the safety record of diazepam alone has maintained its suitability for intravenous sedation in dentistry.

Teaching of sedation techniques in Canadian dental schools

Undergraduate programs

A survey carried out in Canadian dental schools in December 1972 showed wide variation in timing, scope and teaching expertise in the field of sedation. Only six of the 10 schools were teaching nitrous oxide sedation, and five were teaching intravenous sedation (Table 1). Alberta, Manitoba, Saskatchewan and the University of Western Ontario dental schools taught both methods of anxiety control.

The drug used for intravenous sedation varied; diazepam being the most commonly used, followed by meperidine and the barbiturates.

The year of instruction varied from the second to the fifth year of dentistry. Some schools had established these sedation programs seven years previously while others began for the first time in 1972.

The teaching department was primarily oral surgery, but the departments of anaesthesiology, oral medicine and restorative dentistry were also responsible in some schools.

By March 1976, although more schools were teaching these techniques (Table 2), the diversity of intravenous drugs used, the year of instruction and the departments responsible for the teaching were similar to 1972 (Table 3). Those schools teaching nitrous oxide techniques had chosen the "Quantiflex" machine, while in Saskatchewan the "McKesson" unit was also used (Table 4). These machines were limited to a 50 per cent maximum on nitrous oxide with the exception of the University of Western Ontario (70 per cent).

The reasons given for not teaching these techniques were: lack of adequately trained personnel, lack of time in the curriculum and, in one case, intravenous sedation was considered to be "not in the realm of the general practitioner."

Undergraduate teaching of sedation techniques in Canadian dental schools (December 1972) Table 1

	Inhalation	Intravenous
University of Alberta	yes	yes
University of British Columbia	yes	theory only
Dalhousie University	no	theory only
Laval University	no	no
University of Manitoba	yes	yes
McGill University	theory only	theory only
Université de Montréal	no	yes
University of Saskatchewan	yes	yes
University of Toronto	yes	theory only
University of Western Ontario	yes	yes

Undergraduate teaching of sedation techniques in Canadian dental schools (March 1976) Table 2

	Inhalation	Intravenous
University of Alberta	yes	yes
University of British Columbia	yes	yes
Dalhousie University	no	yes
Laval University	theory only	theory only
University of Manitoba	yes	yes
McGill University	theory only	theory only
Université de Montréal	no	no
University of Saskatchewan	yes	yes
University of Toronto	yes	theory only
University of Western Ontario	yes	yes

Curriculum for inhalation sedation (March 1976) Table 3

	Year of instruction	Responsible department
University of Alberta	2nd	Oral biology
University of British Columbia	3rd	Multi-departmental
University of Manitoba	3rd	Stomatology
University of Saskatchewan	4th	Oral surgery + anaesthesia
University of Toronto	2nd	Anaesthesia
University of Western Ontario	3rd	Oral surgery

Type of machine used Table 4

	% N ₂ O	Machine
University of Alberta	50	Quantiflex
University of British Columbia	50	Quantiflex
University of Manitoba	50	Quantiflex
University of Saskatchewan	50	Quantiflex/McKesson
University of Toronto	50	Quantiflex
University of Western Ontario	70	Quantiflex

Continuing education courses in nitrous oxide sedation (March 1976) Table 5

	Given at present	Probable	Possible
University of Alberta	yes	—	—
University of British Columbia	yes	—	—
Dalhousie University	no	no	no
Laval University	—	—	yes
University of Manitoba	no	—	yes
McGill University	no	—	yes
Université de Montréal	no	no	no
University of Saskatchewan	yes	—	—
University of Toronto	yes	—	—
University of Western Ontario	yes	—	—

Continuing education courses in intravenous sedation (March 1976) Table 6

	Given at present	Probable	Possible
University of Alberta	yes	—	—
University of British Columbia	yes	—	—
Dalhousie University	yes	—	—
Laval University	—	—	yes
University of Manitoba	yes	—	—
McGill University	no	—	yes
Université de Montréal	no	—	—
University of Saskatchewan	yes	—	—
University of Toronto	no	—	yes
University of Western Ontario	no	—	—

Continuing education

The role of the universities is not merely to educate undergraduate and graduate students. Faculty members should be involved in up-dating the dental practitioner, especially in such continually evolving areas as sedation techniques.

Tables 5 and 6 demonstrate that the teaching of both nitrous oxide and intravenous sedation at the continuing education level is better established in the western provinces than in the east. Only British Columbia, Alberta and Saskatchewan teach both sedation techniques.

Graduate programs

Although schools with graduate programs in oral surgery would normally include general anaesthesia as part of their instruction, only Toronto has a graduate program designed specifically for dental anaesthesia. This program includes one year of training where the graduate is exposed to a general hospital environment in addition to instruction within the dental school. Such an ideal arrangement would not be possible of course without the co-operation of the medical faculty and the Department of Anaesthesiology in particular.

Establishment of Canadian guidelines

The Council on Education of the Canadian Dental Association reacted positively when aware of the unbalanced teaching in Canadian universities in this particular area. In March 1974 the Committee sponsored a one-day teaching conference in Toronto on "Control of Pain and Anxiety". The faculty members responsible for the teaching of this subject from each of the Canadian schools attended. The conference was to submit to the Council firm proposals regarding future teaching in this field.

This problem had already been recognized by the American Dental Association and after several years of discussions and proposals by several committees, their Council on Dental Education formulated "Guidelines for Teaching the Comprehensive Control of Pain and Anxiety in Dentistry" in May 1971. These guidelines were subsequently approved by the ADA House of Delegates in October of the same year.

Dr. Wayne Hiatt, of Ohio State University, who had been involved in the formulation of the ADA "Guidelines", opened the conference in Toronto with a description of their history, implications, implementation and consequences. The guidelines had been made necessary by the variations in teaching of sedation in the dental schools in the United States and the inherent dangers of one day "hotel" courses in sedation which lacked content and follow-up teaching. Dr. Hiatt's advice therefore saved the conference delegates much time in assessing the problem at hand and moving towards a solution.

The participants assessed what could and should be taught, especially at the undergraduate level in Canada. It was the unanimous opinion that Canadian "Guidelines" should be established and based on those of the ADA. It

was also recommended that a recent statement by the Canadian Society of Oral Surgeons concerning the teaching of nitrous oxide sedation be used as a further reference material since their proposals were similar to those of the ADA. These recommendations were forwarded to the Council on Education and were subsequently accepted at a Council meeting in April 1974.

The Education Committee of the Association of Canadian Faculties of Dentistry, was charged with the formulation of the guidelines. Not only was a subcommittee of the Education Committee established for this purpose, but the subject of pain and anxiety control was chosen as the theme for the next biennial conference of the ACFD in 1976.

The sub-committee was not structured to cater only for oral surgeons who had traditionally taught the sedation techniques. It was recognized that the control of anxiety was not always possible by pharmacological means. The paedodontic members of the sub-committee, in particular, advised that there should be a behavioural science component to the guidelines. The main difference between the Canadian and the ADA guidelines is the inclusion of the area of behavioural science.

These guidelines were presented to and accepted by the ACFD House of Delegates in June 1976 and subsequently distributed to the deans of the Canadian Dental Schools.

Contents of the "Guidelines"

The "Guidelines" defined the scope of pain and anxiety control and set standards for the teaching of this subject at the pre-doctoral, advanced (graduate and postgraduate) and continuing education levels. They included descriptions of course content, sequence of instruction, faculty qualifications and facilities and equipment required for training. Pre-requisites for admission to each level of training were also suggested with differentiation made between the requirements of the general practitioner and of the specialist.

Part I is concerned with the teaching of pain and anxiety control and management of related complications to the dental student. In addition to the more traditional areas such as local anaesthesia and oral sedation, there is also included the teaching of psychological aspects of pain and intravenous and inhalation sedation techniques. It is recommended that these techniques be taught after the student has completed his study of gross anatomy, neuroanatomy, physiology and pharmacology. To prepare the student for proper patient evaluation, physical diagnosis and internal medicine should also be completed beforehand.

The undergraduate pain control program should begin with a course in local anaesthesia, followed by other methods such as analgesics and oral, parenteral and inhalation sedation. Before beginning clinical use of local or systemic drugs there must be thorough indoctrination in cardiopulmonary resuscitation and the prevention and management of other emergencies.

Teaching in the area of general anaesthesiology should be designed to acquaint the student with the subject rather than

to infer any clinical competence. The student should be exposed to the limitations and complexities of general anaesthesia for the ambulatory patient with lectures supplemented with clinical demonstrations before small groups. Those interested in becoming qualified to administer general anaesthesia could continue to a one-year advanced educational program following graduation.

Following the formal course in pain control, the student should have the opportunity to employ the various procedures in all clinical areas and not be confined to surgical cases. There must be sufficient clinical exposure to all sedation modalities to permit the student to gain both proficiency and confidence.

It is essential that the course be taught by well trained staff members for whom anaesthesiology and pain control are areas of major proficiency, interest and concern. The teaching program should not be considered as a secondary departmental function.

One individual should be designated as the co-ordinator and it should be his responsibility to integrate the pain control program within the various departments of the school. This individual should be qualified in all aspects of the subject. He should be assisted in his teaching by well qualified staff and in addition to teaching students, he should orient faculty members in all departments to become proficient in pain control techniques. Where possible the talents and resources of the related medical school or hospital department of anaesthesiology should be used in the teaching and research programs in anaesthesiology of the dental school.

Part II is concerned with the teaching to prepare a dentist to use general anaesthesia, local anaesthesia and sedation in addition to instruction in the psychological aspects of managing pain and apprehension. Wherever possible, this training should be combined with a dental internship or comparable hospital involvement.

This course should take at least one calendar year, of which a period of three to six months should be devoted to the learning of general anaesthesia and related subjects in the hospital operating room. The teaching should be under the auspices of the anaesthesiology services and the instruction supervised by an anaesthesiologist. Both basic and clinical research should be encouraged during the program.

The responsibility for this program should lie with either a dentist or physician qualified in comprehensive pain control in dentistry. He should have at least three years' experience, including one year of training in general anaesthesia and other forms of pain control in addition to two years of practice and/or teaching.

Part III of the guidelines is probably the most interesting to the practising dentist as it is concerned with continuing education courses. Three types of programs are described in this section:

1. Comprehensive programs to provide clinical and didactic training in limited areas of sedation and analgesia. This course should be at least 40 hours in duration with one-third to one-half of this time devoted to clinical applica-

tion and with a student-teacher ratio of 8:1. On completing such a course, every student should be evaluated on his proficiency by the director of the course.

2. Supplemental programs to give additional training to those having completed a comprehensive program and who wish to obtain competence in other areas of sedation and analgesia. These courses can be of varying length and scope dependent on the subject matter.
3. Incidental programs to inform practising dentists of the scope and variation of sedation and analgesic techniques available or to provide trained individuals with reviews of their subject. There is no inference of clinical competence associated with such programs.

Any course designed to teach a clinical technique should be taught only in a dental school, hospital or other educational institution where adequate facilities are available for proper patient care. The courses should be directed by qualified instructors with at least one year of previous advanced training in comprehensive pain control and with broad clinical experience in the area being taught. The practice of inadequate two-day courses given in a hotel should be stopped. Hopefully it would also encourage teaching institutions to provide both facilities and trained clinicians to teach these modalities.

Conclusion

These guidelines have been evolved at a time when many provincial bodies are becoming concerned as to the responsibilities of the dentist in the field of pain control. They should be invaluable therefore in providing a solid policy by which to judge any dentist's training and subsequently his limitations. Having been accepted by the teaching authorities of Canada, it would be hoped that those responsible for the licensing of our dentists would also endorse this document. Such action has been taken by at least two provinces and indicates to the public that the profession is taking responsibility for the training and updating of its members.

Dr. Donaldson is associate professor at the Department of Restorative Dentistry, University of British Columbia, Vancouver.

- 1 Jorgensen, N. B. and Leffingwell, F. Premedication in dentistry. *Dent Clin N Amer* 5:299, 1961.
- 2 Sternbach, L. H. and Reeder, E. Quinazolines and 1,4-Benzodiazetines. IV^{1,2} Transformations of 7-Chloro-2-methylamino-5-phenyl-3H-1, 4-Benzodiazepine 4-Oxide.³ *J Organ Chem* 26:4936, 1968.
- 3 Davidau, A. New methods in anaesthesiology and their use in dentistry. Treatment of difficult patients and execution of complex procedures. *Rev Assoc Med Israelites France* 16:663, 1967.
- 4 Brown, P. R., Main, D. M. and Lawson, J. I. Diazepam in dentistry. Report on 108 patients. *Brit Dent J* 125:498, 1968.

RAPIDLY PROGRESSING INTERNAL RESORPTION

A. Ruprecht, DDS, MScD, FRCD(c)

B. L. Mang, DDS

Saskatoon, Sask.

This article reviews the clinical aspects of internal resorption of teeth and presents a case report. The rapidity with which treatment should commence is stressed.

Since internal resorption was first reported by Bell in 1830,¹ many reports have appeared in the literature.²⁻⁷

The cause of internal resorption is still not definitely established. Similar to resorption of other hard tissue, it is mediated by multinucleated giant cells,⁸ in this case, odontoclasts of the pulp. It has been suggested that these cells are stimulated by trauma, endocrine dysfunction or infection, due to caries or pulp exposure, leading to inflammation.¹⁰

Internal resorption in its early stages is usually asymptomatic. It is often discovered because of a change in colour of the crown of a tooth when the process occurs in the pulp chamber,¹¹ or when radiographs, taken for other reasons, reveal a localized widening of the root canal, with or without enostosis (bone formation within the canal).¹²

If lateral perforation occurs, the lesion could become symptomatic. The patient may present with a fluctuant swelling or draining sinus tract. At this time it may be impossible to differentiate radiographically internal from external resorption.^{7,13}

Treatment of internal resorption consists of removal of the odontoclasts by extirpation of the pulp followed by endodontic obliteration. Once perforation has occurred, the treatment becomes more difficult because the perforation may be obturated just as the apex must be sealed in routine obliteration. Surgical obturation with amalgam may be difficult due to inaccessibility of the lesion or because of its size, thus dictating non-surgical treatment. This task is also often difficult due to the lack of a hard, bony matrix against which to condense.¹⁴

The treatment consists of pulpectomy, followed by a succession of interim fillings with a $\text{Ca}(\text{OH})_2\text{BaSO}_4$ paste

forced into the resorption defect to change the pH from acidic to basic, thereby discouraging osteoclastic activity, allowing the periodontium to promote healing to provide a good matrix for vertical condensation of hot gutta percha.

Since perforation complicates treatment, it is imperative to start before the walls of the tooth are breeched. Practitioners contemplating treatment of a patient with such a lesion would wish to know how quickly they must commence treatment. The following case is presented to illustrate the rapidity of the resorptive process.

Case report

G.S., a 28 year old white female was seen by one of us (B.M.) for endodontic treatment of the maxillary left lateral and right central incisors. The patient presented on August 14, 1976 with a draining sinus over the right central incisor which apparently had been present for six to eight months (Fig 1A). The left lateral incisor was asymptomatic, but the radiograph revealed a large area of internal resorption with a possible external perforation. At this time, the pulp canal of the left central incisor appeared normal on the radiograph. The treatment of the right central and left lateral incisors consisted of pulpectomies with placement of an interim $\text{Ca}(\text{OH})_2\text{BaSO}_4$ treatment paste as described previously. On September 9, 1976 the patient was recalled. The sinus tract over the right central incisor had healed but radiographs revealed a widening of the canal of the left central incisor (Fig 1B). Due to lack of time, an appointment was arranged six weeks hence to check on the condition of all three teeth.

On October 27, 1976 the canal of the left central incisor had grossly enlarged (Fig 1C). In six weeks, an area of minimal internal resorption had progressed so rapidly as to render treatment virtually impossible.

Concomitant with the worsened condition of the left central incisor, the left lateral incisor had developed a periapical radiolucency and fluctuant swelling not apparent before treatment. Despite the fact the sinus tract over the right

central incisor had healed, it was decided after consultation with the patient to extract all three incisors and place a porcelain fused to gold bridge.

Discussion

Simple internal resorption is often treated with relative ease. Once complicated by perforation, treatment becomes difficult, if not impossible. The practitioner who discovers resorption should know how quickly he must start treatment if the problem is to remain manageable. The case presented shows that internal resorption may be rapidly progressive and that treatment must be initiated at once.

Dr. Ruprecht is associate professor and head of the Department of Diagnosis and Oral Radiology, University of Saskatchewan, Saskatoon, Sask, S7N 0W0.

Dr. Mang is in private practice and is a part-time lecturer in endodontics in the Department of Restorative Dentistry, University of Saskatchewan.

1 Bell, T. The anatomy, physiology and diseases of the teeth. Philadelphia, 1830. In: Mount, G. F. Idiopathic internal resorption. Oral Surg 33:801, 1972.

2 Berning, H. P. and Lipp, F. L. Progressive internal resorption in permanent teeth. Dent Abstr 3:607, 1958.

3 Colyn, J. F. and Sprawson, E. Dental surgery and pathology. Ed. 6. London. Longmans, Green and Co., 1931.

4 Rabinowitch, B. Z. Internal resorption. Oral Surg 33:263, 1972.

5 Thoma, K. H. and Goldman, H. M. Oral pathology. Ed. 5. St. Louis. Mosby, 1960.

6 Wege, W. R. Idiopathic internal resorption. Oral Surg 36:443, 1973.

7 Worth, H. M. Principles and practice of oral radiologic interpretation. Chicago. Year Book Medical Publishers, 1963.

8 Ingle, J. I. Endodontics. Philadelphia. Lea & Febiger, 1971.

9 Pierce, C. N. Secondary dentine: its physiological and pathological significance. Trans. Dent Society State of New York, 1891. In: Wedge, W. R. Idiopathic internal resorption. Oral Surg 36:443, 1973.

10 Mitchell, D. F. Standish, S. M. and Fast, T. B. Oral diagnosis/ oral medicine. Philadelphia. Lea & Febiger, 1971.

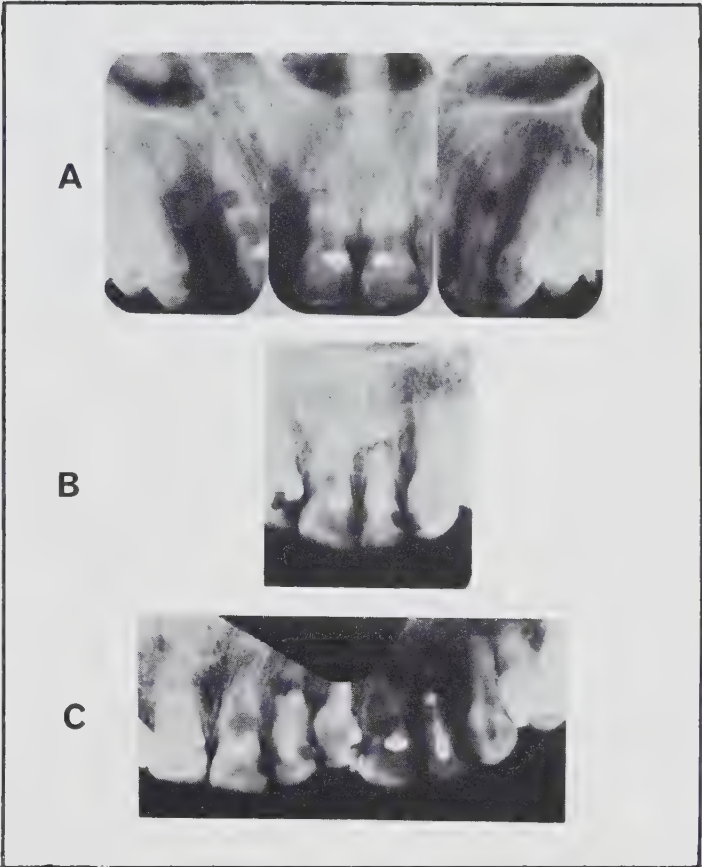


Fig 1 (A). (August 14) — Radiographs show internal resorption of the maxillary right central and left lateral incisor. There is no evidence of internal resorption of the left central incisor. (B). (September 9) — Radiograph shows internal resorption of the left central incisor. (C). (October 27) — Only seven weeks after discovery of the resorption, the lesion had advanced close to the point of perforation. Co-incidentally, the lesion of the left lateral incisor had also advanced.

11 Mummery, J. H. The pathology of "pink spots" in teeth. Brit Dent J 41:301, 1920. In: Rabinowitch, B. Z. Internal resorption. Oral Surg 33:263, 1972.

12 Reid, J. A. and Ruprecht, A. So you have taken a radiograph — now what? J Ont Dent Ass 53:6, 1976.

13 Mount, G. J. Idiopathic internal resorption. Oral Surg 33:801, 1972.

14 Frank, A. L. Dent Clin N Amer 18:470, 1974.

STATUS REPORT: ROOT CANAL SEALING MATERIALS

At the present stage of endodontic knowledge, it is generally considered that success in root canal therapy is dependent upon (a) elimination of infection and (b) permanent obliteration of the root canal by a non-toxic material. Recently, the necessity of root canal obliteration has been widely discussed^{1,2} and questioned. Although the exact biological sequelae at the apex of an incompletely filled canal are not fully understood, many studies have indicated that failure can be associated with such a deficiency.^{3,4} This is probably due to the fact that it is difficult, if not impossible, with presently available techniques to sterilize all root canals completely and thus the importance of the filling is to separate the periapical tissues from irritants left within the canal or which may arise *de novo* through loss of the coronal seal.

An empirical approach has dominated endodontic therapy, and thus current root canal filling materials and techniques are many and varied. All have their supporters. There are basically two methods of approaching obliteration: (i) core material (silver or gutta percha) plus cement sealer or solvent and (ii) paste or cement material without core.

Pastes

Root canal pastes, unlike sealers, are intended to fill the entire canal. They exist in a wide variety of compositions and contain, among other things, steroids, antibiotics, iodine and paraformaldehyde. The formulae of the available commercial pastes appear to be even more empirical and arbitrary than the root canal sealing materials discussed later. Such materials must be regarded more as drugs with medicinal qualities, due to their complex pharmacology, rather than dental materials; and for that reason, they will not be discussed here. It may be noted however, that the use of such materials is subject to the regulations on drugs and devices of the Food and Drugs Act.

Some clinicians feel that the established deficiencies in the techniques of totally eliminating infection from the canal warrants the use of a root filling material which has definite anti-infective properties rather than sealing properties, and that the advantages of such medicinal ingredients overcomes any disadvantages due to possible toxicity.

Core materials plus cements

Many sealing studies have shown that the most efficient root canal filling consists of a fitted point (preferably combined with condensation) used with a sealer.⁵⁻⁷ Gutta percha was found to be better than silver. The popularity of silver points has declined in recent years for this reason and also because of the likelihood of corrosion within the canal. Examination of silver cones removed from teeth treated from three months to 20 years previously showed all to have corrosion changes. X-ray diffraction studies showed the corrosion products to be silver sulfides, sulfates, carbonates and silver amine sulfate amide hydrates. Tissue culture studies showed that the products were highly toxic. All the corroded silver cones were associated with acute clinical "flare-up" years after completion. Thus, when corrosion-prone metals are used in root canals, the possibility of corrosion and cytotoxicity is always present.

The importance of the sealer has been shown by sealing studies and also by studies of the internal anatomy of prepared root canals, many of which are highly irregular. Zinc oxide and eugenol in combination with other additives have provided the basis for almost all the widely accepted root canal sealers. This would seem to be almost entirely due to tradition. As Smith⁸ pointed out, in relation to periodontal packs, "eugenol is not a particularly good antiseptic and there is considerable evidence that although it has an anodyne effect it produces tissue necrosis and actually tends to delay healing". The ability of the zinc eugenate cements to minimize leakage has been shown *in vitro*; however, their low strength and continued loss of eugenol may lead to poor durability.

Recently there has been a trend to complexity in the newer materials produced in an attempt to improve the performance of root canal sealers. Application of polymer chemistry has led to the commercial development of two materials which are not eugenolates. Diaket, a polyvinyl resin in a polyketon vehicle, was introduced in Europe by Schmitt in 1951.⁹ A second widely-used material is AH-26, an epoxy resin, introduced by Schroeder.¹⁰

Root canal sealers must possess certain properties in order to function efficiently over the long term in the capac-

ity for which they are designed. Adequate working time, ability to flow into irregularities, no volume changes when setting, adhesion or maintained intimate contact with the canal walls, adequate strength to resist displacement of points by manipulative post procedures,⁷ no deterioration within the canal over long periods of time in tissue fluids, adequate radiopacity as well as antimicrobial activity and biological compatibility must all be considered. Recent studies of the physical properties of nine such commercial sealers emphasized the empirical nature of these materials.¹¹ Results varied considerably between the various brands and even between different batches of the same product. All the ZOE sealers showed shortcomings with regard to strength, adhesion and solubility. Individual zinc eugenate materials also showed inadequate results in other physical properties. No chemical adhesion to root dentine could be demonstrated with these materials, and their rate of disintegration in water was high. The Diaket polyvinyl resin was more satisfactory with regard to strength and solubility. No adhesion to root dentine could be shown. Working qualities were good, but a low flow was recorded. The epoxy resin AH-26 had superior properties with regard to strength, flow and radiopacity, and was the only commercial root canal cement which gave definite chemical adhesion to root dentine (maintained during immersion in water). However, its colour is dark and the recorded solubility in distilled water was high.

The success of any material for clinical use depends on acceptable performance from both physical testing and biological evaluation. Endodontic filling materials come into contact with connective tissue and frequently with bone. It is imperative that no further damage be done to these tissues due to the materials obliterating the root canal. Biological studies show that the available root canal ZOE materials are all capable of causing damage to the tissues of experimental animals. All are irritating in the unset state¹² and should be used in the minimal amount to achieve complete obliteration. Diaket and AH-26 also have been shown to give a severe inflammatory response in several studies.¹³⁻¹⁶ The immediate severe reaction to AH-26 takes place whether it is implanted in the set or unset state.¹⁷⁻¹⁹

Another technique utilizing a gutta percha core involves solvent moulding. This utilizes chloroform or chloropercha pastes, which use chloroform as the solvent liquid. Free chloroform is a potential irritant, but it is non-irritating when the material is completely set. Large changes in dimensions take place with any solvent moulding, and could theoretically be the cause of greater leakage. The clinical success reported for this method of root filling is probably due to the skill of the operator (with compensatory condensation), and only slight solution of the gutta percha.

In searching the literature for the ideal material, it has been found that the results from one worker to another are diverse and confusing.

It is apparent that root canal sealers have been developed on an empirical basis due to a lack of scientifically based criteria which have been proven clinically. The empirical

nature of these cements is emphasized by the number of commercial sealers available with numerous complex ingredients, the reasons for which are often obscure. It is interesting to note that recent investigators comparing common root canal filling techniques and sealers concluded that unmodified zinc oxide-eugenol was the most effective sealer studied.²⁰

If the function which has been ascribed to root canal sealers is as important as theory would suggest, then there is certainly room for a more scientific outlook in the field and for improved materials. At the Third International Conference on Endodontics,²¹ a seminar on the present status of root canal fillings concluded that there is a need for a better cementing medium, one which is less irritating and has better sealing properties. Roydhouse²² stated that new materials which consolidate with dentine as a function of the chemistry rather than as a function of the operator are needed. In 1970, Ainley²³ stated that until a sealing technique is developed which gives molecular bonding of the filling material to the tooth structure, total obliteration of the root canal is impossible. A material which can remain insoluble and adhesive under oral conditions for many years and also possess all the desirable clinical attributes must be exceptional.

The adhesion to dentine in the presence of moisture and consequent sealing potential of the polycarboxylate cements, introduced by Smith,²⁴ have led to their trial as a root canal sealer. These materials have been shown to have antimicrobial properties, low solubility and low tissue irritancy. The conventional commercial forms do not manipulate satisfactorily, but the physical properties of a specially prepared polycarboxylate endodontic formulation were good. Superior strength, adhesion and solubility properties together with good flow and manipulative characteristics indicated that this material shows great promise. Further development is being carried out.

Similarly, the cyanoacrylate adhesive materials are being investigated as to their promise as improved root canal sealers. A further new development is the hydrogel materials being studied by Goldman.²⁵ These developments indicate that improved materials should become available which will help to place root canal therapy on a more sound basis.

The Council is grateful for the preparation of this report by Dr. D. McComb, a dental practitioner in Toronto.

- 1 Gutierrez, J. H., Gigoux, C. and Scobar, F. Histologic reactions to root canal fillings. *Oral Surg* 28:557, 1969.
- 2 Torneck, C. D. Reaction of rat connective tissue to polyethylene tube implants. Pt. I. *Oral Surg* 21:379, 1966.
- 3 Strindberg, L. Z. Dependence of the results of pulp therapy on certain factors. *Dent Abstracts* 2:176, 1957.
- 4 Ingle, J. Root canal obturation. *J Amer Dent Ass* 53:47, 1956.
- 5 Marshall, F. J. and Massler, M. The sealing of pulpless teeth evaluated with radioisotopes. *J Dent Med* 16:172, 1961.

References continue on page 540

Think of the ideal toothbrush.

- short head—1"
- soft .008" bristles
- polished bristle ends
- flat trim



You're thinking of

Tek*

Gentle Action*

Write for samples

Tek Hughes Products Limited
974 Lakeshore Rd. E.,
Mississauga, Ontario. L5E 1E4

*T.M.

Made in Canada by a 100% Canadian owned company.

- Kapsimalis, P. and Evans, R. Sealing properties of endodontic filling materials using radioactive polar and non polar isotopes. Oral Surg 22:386, 1966.
- Neagley, R. Effect of dowal preparation on apical seal. Oral Surg 28:739, 1969.
- Smith, D. C. A materialistic look at periodontal packs. Dent Pract 20:263, 1970.
- Schmidt, W. Eine Neuartige Wurzel-fullung aus Kunststoff. Die Autopolymerisation in Wurzelkanal. Zahnartzl Welt 6:414, 1951.
- Schroeder, A. Mitteilungen uber die Abchlussdichtguthut von Warzelfullmaterialen und erster Hinweis auf ein Neuartiges Wurzelfullmittel. Schwuz Monatschr Zahnh 64:921, 1954.
- McComb, D. and Smith, D. C. Comparison of physical properties of polycarboxylate-based and conventional root canal sealers. J Endodont 2:228, 1976.
- Langeland, K. Root canal sealants and pastes. Dent Clin N Amer 18:309, 1974.
- Erausquin, J. and Muruzabal, M. Tissue reaction to root canal fillings with plastic cements. Oral Surg 29:91, 1970.
- Friend, L. A. and Browne, R. M. Tissue reactions to some root filling materials. Brit Dent J 125:291, 1968.
- Spanberg, L. Biological effects of root canal filling materials. Odont Tidsk 77:133, 1969.
- Friend, L. A. and Browne, R. M. Tissue reactions to some root filling materials implanted in the bone of rabbits. Arch Oral Biol 629, 1969.
- Knolle, G. Verwendung von Epoxydharzen in de Zahnheilkunde und die Gewebevertraglichkeit von AH-26. Dtsch Zahnaertzt Z 14:1520, 1959.
- Rappaport, H. M., Lilly, G. E. and Kapsimalis, P. Toxicity of endodontic filling materials. Oral Surg 18:785, 1964.
- Keresztesi, K. and Kellner, G. The biological effect of root filling materials. Int Dent J 16:222, 1966.
- Goerig, A. C. and Seymour, F. W. Comparison of common root canal filling techniques and sealers. J Amer Dent Ass 88:826, 1974.
- Transactions of the Third International Conference on Endodontics. pp 138-143, 1963.
- Roydhouse, R. H. Penetration around the margins of restorations. J Canad Dent Ass 34:21, 1968.
- Ainley, J. A. Fluorometric assay of the apical seal of root canal fillings. Oral Surg 29:753, 1970.
- Smith, D. C. A new dental cement. Brit Dent J 125:381, 1968.
- Benkel, B. H., Rising, D. W., Goldman, L. B. et al. Use of a hydrophilic plastic as a root canal filling material. J Endodont 2:196, 1976.



RINGS



100 - \$5.00

400 - 15.00

Ont. 7% Sales Tax

Send Order with Cheque or Money Order to:

FOR DENTISTS, DOCTORS, HOSPITALS
FOR BIRTHDAYS, PARTYS, CLUBS, ETC.

B. DENTIST RINGS - 12 Different

C. DOCTORS RINGS - 6 Different

D. SMILE RINGS

E. ASSORTED RINGS (Big Assortment)

F. SANTA RINGS







ACTIONMATIC LTD.
Box 326, CHATHAM, ONTARIO
N7M 5K4





Assorted Rings

CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE.

Direct advertising copy to:
Marie Cosgrave, Classified Advertising Manager,
Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6.
Telephone: (613) 523-1770.

CLASSIFIED ADVERTISING RATES (Per Insertion Per Issue):

Minimum (50 words or less)	\$15.00
Each additional word	.30
Service charge for C.D.A. Box No.	2.00

DISPLAY CLASSIFIED ADVERTISING RATES: Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

OFFICES AND PRACTICES

BRITISH COLUMBIA — Abbotsford. Dental office for rent in modern professional building in Abbotsford, adjacent to hospital. Panoramic view. Apply: McCallum Terrace Holdings, 2151 McCallum Rd., Abbotsford, B.C. V2S 3N8.

BRITISH COLUMBIA — Fort Nelson. For Sale: One or two man practice located in north east British Columbia, the focal point of the Alaska Highway Pipeline. A boom situation in a stress free environment with all outdoor recreation facilities, including cross country skiing, fishing and hiking. Write to: Dr. J. Morris, 2255 Frost Avenue, Sidney, B.C. or phone: (604) 656-1347.

BRITISH COLUMBIA — Vancouver (Central). Booming practice for sale. Modern equipment and busy location. High gross. Requires two dentists. Resident dentist retiring and going into further education respectively. Please reply to CDA Box Number 1744.

BRITISH COLUMBIA — Vancouver Island. For Sale: Practice in Campbell River-Courtenay area. Three operatories equipped, with fourth room plumbed and wired. Last year's gross was \$186,000. Reply to CDA Box Number 1740.

BRITISH COLUMBIA — Victoria. For Sale: Two operator practice in downtown Victoria, with emphasis on relaxed and enjoyable conditions for both patients and staff. Good gross on cash basis. Reply to CDA Box Number 1736.

ALBERTA — Hinton. Five-year-old practice for sale. High gross, new building, 15 miles from National Park. Owner will associate for six to 12 months. Town of approximately 8,000 and growing rapidly. Excellent investment opportunities. Reply to CDA Box Number 1729.

SASKATCHEWAN — Battleford. Office space for rent. One or two dentists greatly needed. None in town. Large drawing area including North Battleford where dentists are heavily booked. Will build new air-conditioned office according to specifications. Write: Box 459, Battleford, Saskatchewan, S0M 0E0.

SASKATCHEWAN — Central. Excellent opportunity for dental practice in a central Saskatchewan town of 1200. Real estate ideal for establishment of a small dental clinic. Consists of a large, modern home with built-in office and waiting room. For more information write or phone: Dr. Paul Edwards, Box 268, Wakaw, Saskatchewan. Phone: 233-4233.

ONTARIO — Cannington. Golden opportunity awaits any dentist setting up practice in Cannington, 70 miles north-east of Toronto. Rapidly developing small town of 1,500. Local hospital privileges. New medical centre with spacious fully serviced dental suite. Present part-time dentist leaving to concentrate on his city practice but might sell some equipment. Apply: Box 370, Cannington, Ont. L0E 1E0. Phone: (705) 432-2569.

ONTARIO — Hamilton. Dental office and practice for rent. Reasonable overhead. Monthly rent including equipment \$150.00. Reply to: Dr. T. Siegel, 546 Barton Street E., Hamilton, Ont. L8L 2Z1, or phone (416) 529-1221.

ONTARIO — South-eastern. Successful dental practice in new medical dental building for sale. Twelve hundred square feet of comfortable working space. Consists of two main operatories of new Siemens equipment and newly equipped hygienist room. Spacious waiting and business area. Good size lab. Dark room and private office which could become fourth operator. Suitable for two dentists interested in partnership. Reply to CDA Box Number 1743.

QUEBEC — Montreal. Four year established general practice in the west end area. Four operatories, two fully equipped. Excellent opportunity for one or two prevention-oriented dentists. One thousand square feet, commercial laboratory next door. Yearly gross income near one hundred thousand dollars. Owner specializing. Please reply to CDA Box Number 1709.

NOVA SCOTIA — Halifax. Spacious dental office for rent. Central location, ground floor, near universities and hospitals. Modern equipment for sale or rent. Dentist wishes to retire from an established practice of 30 years. Reply to: Dr. S. Chernin, 5943 Spring Garden Road, Halifax, N.S. Phone: (902) 423-6720, 429-3091.

IRELAND — Very lucrative, single handed practice for sale in thriving coast town, south Ireland. First class modern equipment. Late Victorian residence also for sale. Reply to CDA Box Number 1733.

ASSOCIATESHIP AVAILABLE

BRITISH COLUMBIA — Richmond. Full time associate required for modern, preventive oriented family practice in this Vancouver suburb. Excellent opportunity for the right person to practise all phases of general dentistry in an enjoyable atmosphere. A practice-sharing option will be considered if philosophies are compatible. Preference given to experienced persons. Please reply to CDA Box Number 1745.

BRITISH COLUMBIA — Vancouver. Associate wanted for a downtown office, preferably a dentist with a minimum of two years' experience. Long term possibilities. Reply to CDA Box Number 1742.

BRITISH COLUMBIA — Vancouver. Full time associate required in a four dentist office. Modern equipment throughout. Local and general anaesthetic services offered to the patient. Modern air-conditioned offices on the ground floor in an active business centre of Burnaby. Contact: Dr. H. Guenther, 4611 Kingsway, Burnaby, B.C. V5H 2B3. Phone: (604) 437-8681.

BRITISH COLUMBIA — Victoria. Young, associate dentist required. Four-chair modern operatories. Strictly medical-dental building (opposite Jubilee General Hospital). General anaesthesia privileges. Family-oriented practice. No capital outlay. Reply to: Dr. B. Rauch, #310 - 1900 Richmond Avenue, Victoria, B.C. V8R 4R2.

ALBERTA — Edmonton. Associate wanted on a percentage or facility leasing basis, in a preventive oriented office. Situated near city centre. Immediate high income assured. Please reply to CDA Box Number 1739.

SASKATCHEWAN — Rosetown. Associate wanted in modern air-conditioned building. Four operatories, four-handed dentistry. High-gross income. Contact: Dr. Frank Ireland (306) 882-2123 office, or (306) 882-3922 residence.

ONTARIO — Gore Bay. Associate wanted for well established and extremely busy modern dental office in pleasant rural community. Pollution free surroundings with many lakes and exceptional scenery — everything to offer for the outdoor enthusiast, and only five hours' drive from Toronto. Hospital affiliation is available, excellent opportunity to practise comprehensive preventive dentistry. Reply to CDA Box Number 1701.

ONTARIO — London. Associate, or sale of three operatory practice. Established two years in modern clinic. Reply to CDA Box Number 1746.

ONTARIO — London. Excellent opportunity for an associate. Extremely busy, preventive-oriented family practice. Seventeen miles from London, 3,500 patients, four operatories, excellent income, ideal working conditions, new office in medical-dental building. Would consider group partnership or purchase in future with compatible individual. Owner is desirous of full time associate for this practice while he concentrates on his London practice. Contact: Dr. Brock Rondeau, London, Ontario. Bus: (519) 672-7920.

ONTARIO — Toronto. Associate, full- or part-time required for modern preventive oriented practice in downtown Toronto. Enthusiastic dentist willing to work in all aspects of general practice preferred. Four, 4-handed operatories fully equipped. Reply to CDA Box Number 1728.

ONTARIO — Winchester. Associate required for established associateship practice in Winchester, 30 miles south of Ottawa. Available immediately on a full- or part-time basis. Modern 2000 square-foot office with six operatories, Cox equipment, Panelipse, and large lab area. Office includes Hygienist and Denture Therapist. Good opportunity. Contact: Dr. R.D. Wells, (613) 774-2616, or write: Box 729, Winchester, Ont. K0C 2K0.

OPPORTUNITIES AVAILABLE

YUKON — Whitehorse. New Medical Arts Building under construction. Only one Dental Clinic in territory, and grossly overworked. Room for up to three dentists in above building, and welcomed by both medical and dental professions. Must be willing to take turns to cover outlying communities. May design own area within the building. Write: Family Practice Unit, 2099-2nd Avenue, Whitehorse, Yukon Territory, Y1A 1B5. Telephone (403) 667-6421.

ALBERTA — Canmore. Dentist required in mountain community Canmore, Alberta (11 miles east of Banff, 55 miles west of Calgary). Town population of 2,400 plus serving an additional 2,500 in surrounding area. One of the fastest growing areas in the west. Office space is in an attractive professional building, currently in completion stages of construction, located in main business block of town. Excellent opportunity for someone who would enjoy mountain living at its best, with excellent skiing, fishing and hiking. Reply to: E. H. Lipinski, M.D., Box 400, Canmore, Alberta, T0L 0M0, or phone (403) 678-5583 or 678-5998.

SASKATCHEWAN — Saskatoon. University of Saskatchewan — College of Dentistry. Applications are invited for a full-time position in Periodontics. Depending on qualifications applicants will also be considered for Chairmanship of the Department. Duties will include administration of the departmental activities together with involvement in teaching and research. The candidate should have a broad clinical and academic background. The appointment will be at a senior level and salary will be according to qualifications and experience. Postgraduate or graduate qualifications in Periodontics required. Letters of application and curriculum vitae should be sent to: Dr. E. R. Ambrose, Dean, College of Dentistry, University of Saskatchewan, Saskatoon, Saskatchewan, Canada, S7N 0W0. Closing date for applications is February 28, 1978.

SASKATCHEWAN — Saskatoon. University of Saskatchewan — College of Dentistry. Applications are invited for a full-time teaching position in the Department of Restorative Dentistry. Applicants must be graduates of an accredited dental program and should have advanced training in Operative Dentistry and/or Endodontics and/or Biomaterials Science. Preference will be given to those applicants who have private practice and teaching experience in these related areas. Academic rank and salary will be commensurate with qualifications and experience. Letters of application and curriculum vitae should be sent to: Dr. E. R. Ambrose, Dean, College of Dentistry, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 0W0. Closing date for applications is February 28, 1978.

MANITOBA — Gladstone. Seven Regions Health Centre requires a progressive dentist who is interested in settling in a rural community and providing a service that complements the Health Centre concept in our delivery of health care. This concept utilizes a multi-disciplinary approach to health and stresses prevention as well as providing a curative service. Phone collect: (1-204) 285-2968 or write (including resume) to: Mr. Eugene T. Stefiuk, Executive Director, Seven Regions Health Centre, Box 1000, Gladstone, Manitoba, R0J 0T0.

ONTARIO — Newbury. Excellent opportunity for dentist at Four Counties Medical Clinic in Newbury, south-western Ontario. New building, accommodation for two dentists, adjacent to an active hospital — Four Counties Hospital. For information contact: Robert Fennell, Newbury, Ontario. Business phone (519) 693-4485. Home phone (519) 693-4280.

ONTARIO — Dental Underserved Areas. The Ontario Ministry of Health offers financial support for dentists to establish practices in designated underserved dental areas. Locations are available throughout Ontario. Incentive grants, payable over four years, are \$18,000 in Northern Ontario, and \$14,000 in Southern Ontario. Alternatively, a guarantee net professional income of \$28,000 per annum is offered in Northern Ontario. A limited number of salaried positions are open on mobile dental coaches. Apply to: Dental Officer, Program for Underserved Areas, 7 Overlea Blvd., Toronto, Ont. M4H 1A9. Phone: (416) 965-5036.

OPPORTUNITIES WANTED

ORAL SURGEON, aged 34, family, completing Board-approved residency June 1978 in New York. Extensive training in all phases of oral and maxillo-facial surgery and general anesthesia. Have passed C.D.N.E.B. Seeks association in Ottawa region, will consider other areas. Reply to CDA Box Number 1738.

PAEDODONTIST — Aged 28, married, completing two-year hospital residency (7/1/'78). Excellent background in anaesthesia, handicapped patients, orthodontics. Private practice experience, passed N.D.E.B.'s. Desires associateship or purchasing of private practice in small community. Mountainous area preferred, but will consider any province. Contact: Dr. Gary Breen, 2171 South Commons Road, Reynoldsburg, Ohio, 43068, U.S.A. or phone (614) 866-1391.

MISCELLANEOUS

WOODTURNING — Are you interested in woodturning as a hobby? Take a two day intensive course for beginners from a qualified teacher. Cut wood the way it prefers to be cut. For further information write to: Practical Woodturning, Post Office Box 171, Brampton, Ontario, L6V 2L1.



CO-ORDINATOR OF DENTAL SERVICE TRAINING

The Department of Education, Province of Nova Scotia, Applied Arts and Technology Division, requires a Co-ordinator of Dental Service Training at the Nova Scotia Institute of Technology.

Minimum Qualifications:

A degree in Dental Health Science and six years related experience, three of which should be in administration or teaching.

Duties:

To plan, organize and supervise the operation of courses in Dental Health Sciences. To liaise with the Nova Scotia Dental Board, the Nova Scotia Dental Association and practising dentists and auxiliaries.

Salary:

Commensurate with qualifications and experience. Please quote Competition Number 77-551. Full Civil Service benefits. Competition is open to both men and women.

Application forms may be obtained from the Nova Scotia Civil Service Commission, P.O. Box 943, J. W. Johnston Building, Halifax, Nova Scotia, B3J 2V9, and from the Provincial Building, Sydney, Nova Scotia, B1P 2L1.

EDUCATIONAL COURSES

THE ACUPUNCTURE EDUCATION CENTRE — Offers three different 20-hour weekend courses in Miami Beach. Fee \$250. each. December 2-4, Macro-Acupuncture; December 9-11, Micro-Acupuncture; December 16-18, Advanced Clinical Acupuncture. Courses approved by the New York State Board for Medicine for credit toward the 100-hour certification requirement in acupuncture. To register mail your cheque to: AEC, P.O. Box 6622, Surfside, Fla. 33154, U.S.A. Phone: (305) 861-1162.

SECOND ANNUAL ACUPUNCTURE CRUISE — Clinical Workshop at Sea. March 21-31, 1978. Ten day Seminar-Clinic aboard the Luxury Italian Liner, *Federico C.* to Venezuela, Colombia, Jamaica, Panama, Curacao and Aruba. Special tour rate includes accommodations and workshop for less than cost of accommodations alone; coupled with a health tour package for the general public. Instructor Dr. Ralph Alan Dale, Adj. Prof. (acupuncture), Physical Therapy program, Florida International University. Director, Acupuncture Education Centre. Write for professional and for the general public brochures to: Acupuncture Education Centre, P.O. Box 6622, Surfside, Fla., 33154, U.S.A. Phone: (305) 861-1162.

MEETINGS

MID-WINTER WESTERN CANADA Dental Convention and Bonspiel. Convention Centre: Regina Inn, Regina, Saskatchewan. March 15-18, 1978. Registration due: February 15, 1978. Contact: Dr. B.A. Knoblauch, 533 Medical and Dental Building, 11th Avenue and Rose Street, Regina, Saskatchewan, S4P 1Z8.

COMBINE SKIING WITH CONVENTION*

*Jan. 28 - Feb. 4, 1978 — Ortisei, Val Gardena, Dolomites. 2nd International Symposium on Oral Implantology and Maxillo-Facial Surgery.

Visit the breathtaking winter sports region of Val Gardena, Dolomites, Italy.

January 21 — Depart Toronto for Milan (Alitalia) or Munich (Swissair). 13 nights' accommodation with private bathroom and three meals daily.

February 4 — 1 night in Milan with breakfast. Also included are: airfare, round trip transfer airport/hotel, and a free ski pass for 1st week.

\$827 Tourist Class; \$904 First Class; \$1029 Deluxe (double occupancy).

Optional extra: 1 day and overnight excursion to Venice, Feb. 4-5; A class hotel (\$60).

Due to limited hotel space, bookings must be made by Nov. 30, 1977.

For bookings and further information, contact:

**Cristina Barden,
Dolomite Tours Ltd.,
108 Dawlish Ave.,
Toronto M4N 1H3
(416) 486-7472**



Community Health Center

3765 Sherwood Drive, Regina, Saskatchewan, S4R 4A9 543-7880
COMMUNITY HEALTH SERVICES ASSOCIATION (REGINA) LTD

DENTAL SURGEON NEW PREVENTIVE DENTAL PROGRAM

Multi-disciplinary out-patient preventive health care unit implementing preventive dental program to include Dentist and ancillary professional staff. Equipment, facility design and program being developed. Dentist's input into final plans essential. Target date — by early spring 1978.

Dental Program to be integrated with central files for out-patients who utilize the Health Center services: physicians, nursing, physical therapy, x-ray, laboratory, optometry, ophthalmic dispensing, social service counselling and child daycare. Health care services are fully supported by individual and group preventive health education programs.

The Community Health Center is a co-operatively organized facility whose members elect Board of Directors annually, through whom administrative staff in concert with professional health workers operate the Health Center.

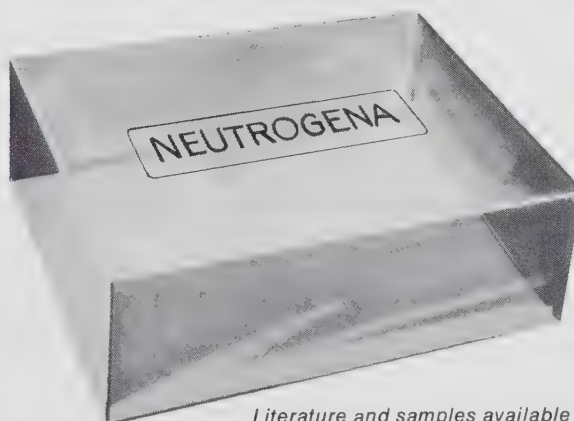
SALARY: To \$34,000

Please address resume to:

Chairman,
Community Health Services Assoc. (Regina) Ltd.,
3765 Sherwood Drive, Regina. S4R 4A9
(306) 543-7880

If you wash your hands 50 times a day (as most dentists do)

You need Neutrogena

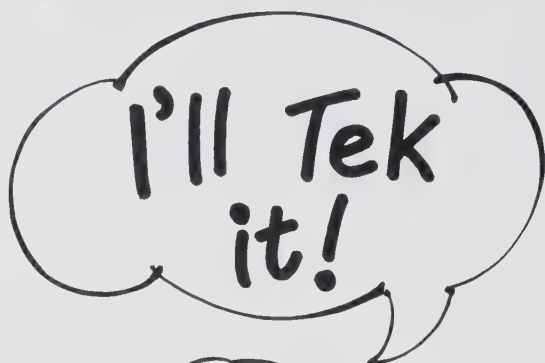


Literature and samples available on request



PROFESSIONAL PHARMACEUTICAL CORP.
2795 BATES ROAD, MONTREAL 251, QUEBEC • (514) 739-3633

Tek*it or leave it.



- short head—1"
- polished bristle ends
- soft bristles —
 - .007" — Delicate Action*
 - .008" — Gentle Action*
 - .009" — Multi Action*

*T.M.

Write for samples
Tek Hughes Products Limited
974 Lakeshore Rd. E.,
Mississauga, Ontario, L5E 1E4

DENTAL LIBRARY
Name _____
Address 124 EDWARD ST.
City TORONTO Prov. _____
Postal Code _____

Made in Canada by a 100% Canadian owned company.

ADVERTISERS' INDEX

Actionmatic	540
The L. D. Caulk Co. of Canada	527, 528
Colgate Palmolive Ltd.	522
Denco	530
Dentsply International	512, 519, 531
Kodak Canada Ltd.	IFC
C. V. Mosby	524, 525
Pelton and Crane	515
Procter and Gamble	511
Professional Pharmaceutical	543
Tek Hughes	540, 544
Warner Lambert Canada Ltd.	OBC
Whaledent	517

Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.

DENTISTS

The Nova Scotia Department of Health invites applications from dentists licensed or eligible for licensure in Nova Scotia.

DUTIES:

To provide general dental services for children; to instruct children and adults in correct oral hygiene procedures and to participate in the dental health education of the Department in an assigned area.

SALARY RANGE:

\$21,396—\$30,158 per annum. (currently under review)

Part-time appointments will be considered where requested.

Full Civil Service benefits.

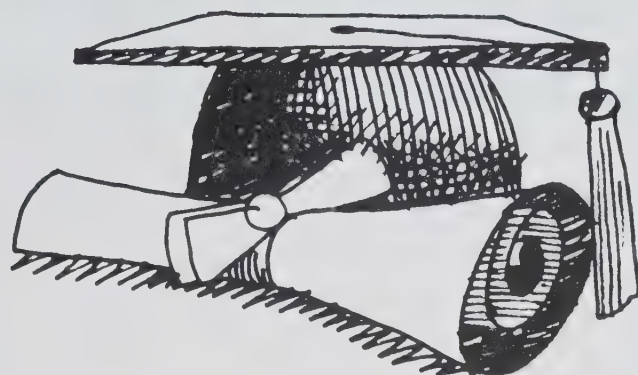
Competition is open to both men and women.

Please quote Competition Number 77-554.

Closing Date: December 24, 1977.

Application forms may be obtained from the Nova Scotia Civil Service Commission, P.O. Box 943, J. W. Johnston Building, Halifax, Nova Scotia, B3J 2V9, and from the Provincial Building, Sydney, Nova Scotia, B1P 2L1.

Because you are... an Educated Man



You enjoy a title of respect in an honoured profession

You enjoy a rich inheritance from educated men who preceded you

You are part of a great tradition:

As an educated man, you share a special obligation to help preserve and extend this heritage for future generations

When you give to the Canadian Fund for Dental Education you help protect the standards and prestige of your profession by supporting CFDE's programs in behalf of dental education and dental care. If you haven't given yet to CFDE this year, please mail your tax-deductible contribution to:

Canadian Fund for Dental Education,
Suite 205, 44 Eglinton Avenue West,
Toronto, Ontario M4R 1A1



CANADIAN FUND FOR DENTAL EDUCATION

Your avenue for giving, to enhance the performance
and prestige of Dentistry

Next time you've got a gum chewer in your chair... hand out some good advice.

Give your patients Trident Sugarless Gum.

Many dentists recommend Trident Sugarless Gum to patients who chew gum. Trident is sugarless, so there's no risk of sugar damage to teeth. And because of Trident's long-lasting flavour, people enjoy chewing it. Trident can also be a worthwhile aid in your dental program for patients who chew gum. So the next time a patient asks about chewing gum, hand out Trident Sugarless Gum—a pack of flavour and good advice.



For dentists who don't want their patients to chew sugar when they chew gum.

THE TRIDENT PROFESSIONAL OFFER

Please send me Trident's Professional Offer consisting of 2 boxes of each flavour: Spearmint, Peppermint, Fruit and Cinnamon. A total of 8 boxes (144 packages) for \$10.00 (regular value: \$28.80). (Ontario dentists include 70¢ Provincial Sales Tax.) Enclosed please find my cheque/money order in the amount of \$_____

Name DENTAL LIBRARY

Address 124 EDWARD ST.

City TORONTO

Prov. ON Postal Code _____

Send to: Trident, Box 2147, Toronto, Ontario M5W 1H1



DENTAL JOURNAL DENTAIRE

Si non livrable
au destinataire
RETOURNER A
L'EXPEDITEUR
Port payé

Undeliverable
to Addressee
RETURN TO SENDER
Return Postage
Guaranteed

Dec 1977/Volume 43/No 12

Canadian Dental Association/Association Dentaire Canadienne



In this issue:
Report on World Dental Congress
The Verruciform Xanthoma

Comparison of Clinical and Photographic
Assessment of Plaque and Gingivitis

R01218
U.O.T. LIBRARY
SERIALS DEPT.
TORONTO ONT
M5S 1A5

Q1

TEMISKAMING AND NORTHERN ONTARIO RAILWAY'S TELEGRAPH

OPERATED BY ONTARIO GOVERNMENT COMMISSION



TERMS AND CONDITIONS

All messages are received by this Railway for transmission, subject to the terms and conditions printed in their Blank Form T.D. 300, which terms and conditions have been agreed to by the sender of the following message. This is an unencrypted message and is delivered by request of the sender under these conditions.

GEO. W. LEE.

Chairman, North Bay 3 15 B 1 PM

69

W. J. KELLY.

Supt. of Telegraphs, North Bay

Dr W J Jackson

Toronto 27 / 1923

Morning papers inform us you have been burned out.

We wish to extend you prompt assistance in any way possible

in the way of equipment tools loan or anything else that will

help you. We are very sorry to get this news but it is our

sincere desire to help you in every possible way, never mind

terms or conditions anything we have is yours for the asking.

Ash Temple Co

Our offer is still good.

Yes, Dr. Jackson, our offer in 1977 is just as good as it was in 1923.

When Ash Temple started business, before the turn of the century, we had a simple business philosophy – "to serve every need of the dental profession". Over the past half century, we have all seen tremendous changes in the dental profession, but that philosophy still stands and,

we think, is responsible for our success as a major dental supply company.

Servicing the needs of dentists is an ongoing challenge at Ash Temple. Developments in medical science have demanded that the most up-to-date equipment, facilities and services be available immediately. It is in this climate of changing

technology and technique that we continue to be your full service dental supply company with offices and warehouses across Canada.

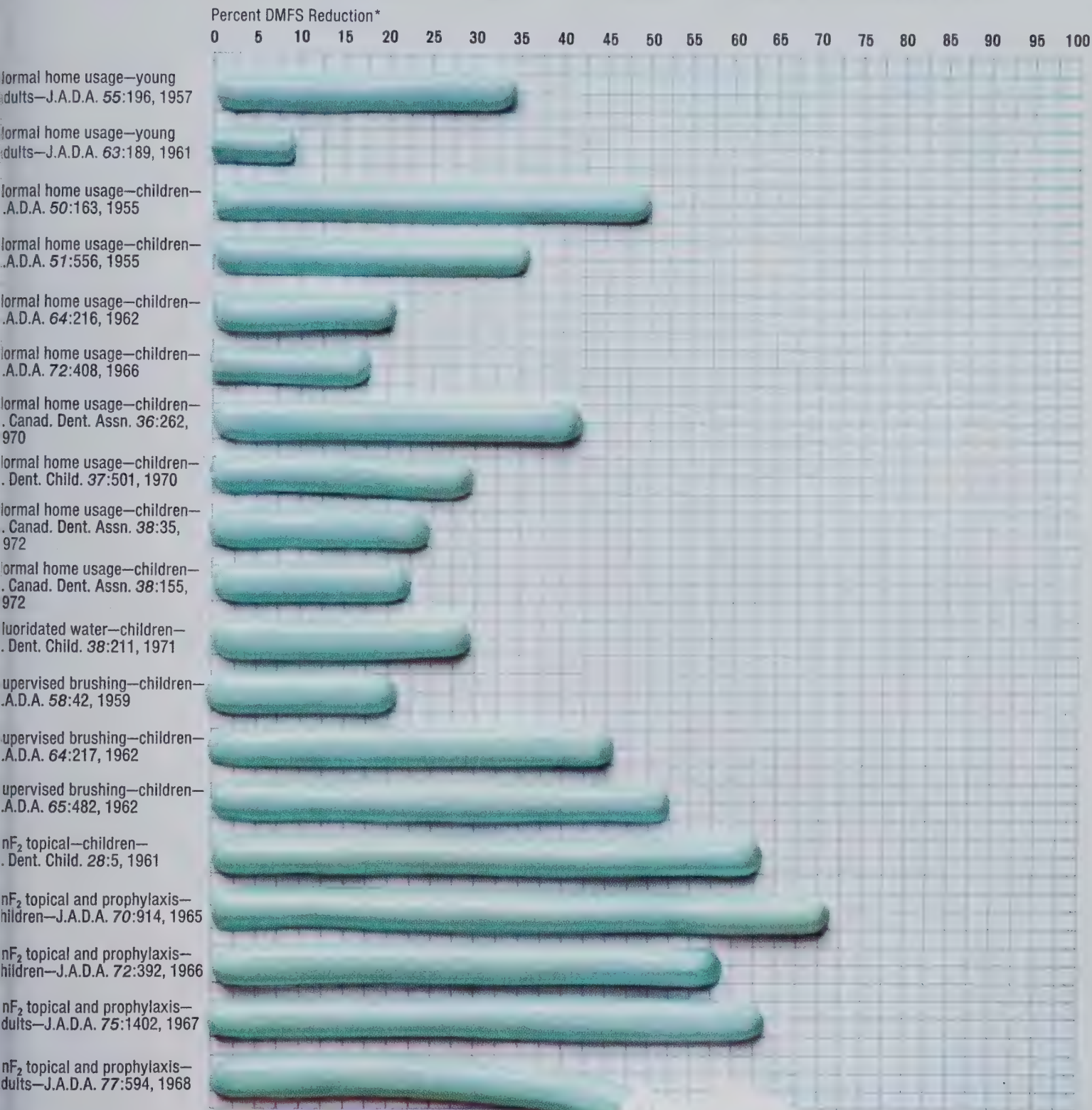
At Ash Temple, we want to serve dentists, and our business philosophy, while over 80 years old – is as fresh as next year's graduates.

Give us a call.

**Ash
Temple**
LIMITED

Tested & Trusted

Crest effectiveness has been proven in more clinical tests under more conditions than any other fluoride dentifrice



"Crest has been shown to be an effective decay-preventive (anti-caries) dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."—Canadian Dental Association

For further information on these clinical studies, write to Crest Professional Services Division, P.O. Box 355, Terminal A, Toronto, Ontario

Confidence based on research=Crest

DMFS) New decayed, missing, or filled surfaces. All clinical studies conducted vs. null control. The control dentifrice was Crest without its stated actives.

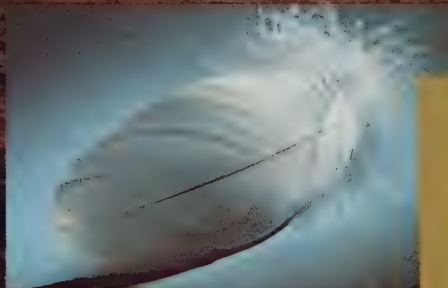
973 PROCTER & GAMBLE, TORONTO

CAS-380

Crest
TOOTH PASTE



In the grace and texture of a feather
there is a simple logic: a harmony of form,
size, color and arrangement.



The Trubyte® System uses the same logic to provide the
point of departure for a beautiful denture.



Trubyte® Bioblend® Anteriors...expressions of
a simple, natural logic.

TRUBYTE®

 Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1977 Dentsply International, Inc.
All rights reserved.

JOURNAL

of the Canadian Dental Association
de l'Association Dentaire Canadienne
Dec/Déc 1977/Volume 43/No 12

PUBLISHER Canadian Dental Association
SCIENTIFIC EDITOR R. S. Turnbull, DDS
EDITOR Diane Charter
FRENCH SCIENTIFIC EDITOR Robert Lambert, DDS

MANAGING EDITOR ADVERTISING Anna Spencer
EDITORIAL SECRETARY Mary Maxwell
CLASSIFIED ADVERTISING Marie Cosgrave
CIRCULATION Cathy Cronin

ISSN 0382-8514

Regular Features

Announcements	548
Letters to the editor	550
Dentistry in the news: Report on World Congress — Part I	552
Les actualités dentaires	563

Articles

La thérapie myofonctionnelle — Gaucher	568
The verruciform xanthoma: Report of a case — Smith and Bunyan	573
A comparison of clinical and photographic assessment of plaque and gingivitis — Johnson, Rozanis, Schofield and Haq	576

Annual Index, Volume 43, 1977	583
-------------------------------	-----

Classified advertising	590
------------------------	-----

Advertisers' index	594
--------------------	-----

Published monthly by the Canadian Dental Association at 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6. Copyright 1977 by the Canadian Dental Association. Authorized as third class mail, Post Office Department, and for payment of postage in cash (Permit No. C-22).

Notice of change of address should be received before the 10th of the month, to become effective the following month.

Subscriptions: North American subscribers — \$20 (Canadian funds) per year; all other countries — \$22 (Canadian funds). No discount for booksellers or agencies. Subscriptions are payable to January 1. New subscribers should not remit until billed.

U.S. representatives: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Phone: 609-589-5454

All statements of opinion and supposed fact are published on the authority of the author who submits them and do not necessarily express the views of the Canadian Dental Association, unless such statements or opinions have been adopted by the Association

Publié chaque mois à 1815 Alta Vista Drive, Ottawa, Ont. K1G 3Y6, par l'Association Dentaire Canadienne. Copyright 1977 par l'Association Dentaire Canadienne. Le ministère des Postes, à Ottawa, a autorisé l'affranchissement en numéraire et l'envoi comme objet de troisième classe de la présente publication (Permis No. C-22)

Veuillez nous prévenir avant le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

Abonnement: Abonnés de l'Amérique du Nord — \$20 (Canadiens) par année; tout autre pays — \$22 (Canadiens). Pas de rabais aux libraires et aux agences Abonnements payables le premier janvier. Les nouveaux abonnés voudront bien attendre de recevoir la facture avant de faire remise

Le représentant aux E.U.: Medical Media, Wm. McCausland, Ed. Goedeke, Box 101, Pitman, N.J. 08071. Téléphone: 609-589-5454.

La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement

Announcements/Avis

We urge readers to confirm meeting dates with the contacts listed with each announcement.

Canadian Dental Association
1978, Winnipeg, September 10-13

Canadian Meetings

Alpha Omega Dental Fraternity Ladies' 9th Annual Art Show Sale and Auction, Edwards Gardens, Toronto, April 15-16, 1978. Featuring Ken Danby, Glen Loates, A.J. Casson, G. Iskowitz, R. Letendre, N. Morrisseau, etc. Proceeds in aid of Dental Education. For information, contact: Mrs. P. Chapnick (416) 223-5478.

Ontario Dental Association and the Dental Society of the State of New York, Joint Convention, Sheraton Centre, Toronto, May 14-17, 1978. Contact: Mrs. W. C. Durham, 234 St. George Street, Toronto, Ontario M5R 2P2.

Les Journées Dentaires du Québec, Quebec Hilton Hotel, Quebec City, May 28-31, 1978. Contact: Dr. R. M. Lang, 5171 Decarie Blvd., Montreal, Quebec H3W 3C2.

Atlantic Provinces Dental Convention, Charlottetown, Prince Edward Island, July 2-5, 1978. Contact: Dr. David O'Connell, 13 Green Leaf Drive, Sherwood, Prince Edward Island.

Pacific Dental Federation Convention, Vancouver, July 23-26, 1978. Contact: Dr. Ken Neuman, President, Pacific Dental Federation, 1125 West 8th Avenue, Vancouver, British Columbia V6H 3N4.

International Meetings

11th International Dental Trade Fair, Bella Center, Copenhagen, Denmark, January 3-5, 1978. Contact: Royal Danish Consulate, 151 Bloor St. West, Suite 310, Toronto, Ontario M5S 1S4.

Yankee Dental Congress, Prudential Center Complex, Boston, Massachusetts, January 13-16, 1978. Contact: Massachusetts Dental Society, 36 Washington St., Wellesley Hills, Massachusetts 02181.

East Coast District Dental Society, Miami Winter Meeting, Fontainebleau Hotel, Miami Beach, January 15-18, 1978. Contact: Barbara Sims, Executive Director, East Coast District Dental Society, 2 S.E. 13th Street, Miami, Florida 33131.

American Society of Oral Surgeons, Clinical Congress on "Current concepts of respiratory disease", Adams Hotel, Phoenix, Arizona, January 21-22, 1978. Contact: ASOS, 211 East Chicago Ave., Chicago, Illinois 60611. Telephone (312) 642-6446.

8th Paulista Convention of Odontology and 10th Latin American Seminar of Odontology, Sao Paulo, Brazil, January 21-28, 1978. Contact: Dr. Edmir Matson, General Secretary, Rua Hamaitá 389, Caixa Postal 2523, CEP 01321, Sao Paulo, Brazil.

Australian and New Zealand Societies of Periodontology, Combined Meeting, Melbourne, Australia, February 9-10, 1978. Contact: Dr. Lloyd G. O'Brien, 147 Collins St., Melbourne, Victoria 3000, Australia.

Australian Dental Association, Jubilee Congress, Melbourne, February 12-16, 1978. Contact: Dr. D. Behrend, Honorary Secretary, 1978

Jubilee Dental Contress, P.O. Box 29, Parkville, Victoria 3052, Australia.

Canadian American Medical Dental Association, 18th Annual Session, Vail, Colorado, February 25 - March 4, 1978. Contact: Dr. H. R. Allott, Secretary Treasurer, 550 Osborn Blvd., Sault Ste. Marie, Michigan 49783.

British Society of Periodontology, International Conference on "The treatment of advanced periodontal disease", Europa Hotel, London, England, April 3-4, 1978. Contact: J. S. Zamet, President, British Society of Periodontology, University College Hospital, Dental School, Mortimer Market, London, W.C.I.

California Dental Association, Scientific Session on "Quality of Life", Anaheim, California, May 5-8, 1978. Contact: Steven Badolato or Geraldine Reeve, California Dental Association, P.O. Box 91258, Los Angeles, California 90009.

Circulo Odontologico Del Sur (Southern Argentina Dental Society), Second International Congress and Third Socio-Economic Congress, Bahia Blanca, Argentina, May 25-28, 1978. International lecturers will deal with all clinical specialties. Contact: Dr. R. L. Ellis, Associate Professor, Department of Community Dentistry, University of Toronto, Faculty of Dentistry, 124 Edward St., Toronto, M5G 1G6.

Congresso da Conferanção Latino-Americana de Protesistas Dentais, Convention Hall of Anhembi Park, São Paulo, Brazil, July 8-14, 1978. Contact: X Congresso da Confederação Latino-Americana de Tecnicos Dentais, 01302 Rua da Consolacao, 2416, São Paulo, Brazil.

STROBEX^{T.M.} MARK II

The electrosurgical unit
designed with many versatile
features and power output to satisfy
every need. Fully filtered and
rectified current.

Unconditionally guaranteed for one year.

MARK II

ONE FOR
EVERY
OPERATORY



Available only through your dealer



WHALEDENT International 236 fifth avenue, new york, n.y. 10001
Division of IPCO Hospital Supply Corp.

Demonstrated at all major conventions

LETTERS TO THE EDITOR

Fluoride in milk?

The August, 1977, issue of the *Journal of the Canadian Dental Association* publishes on Page 355 and 356 copies of correspondence between Dr. R.F. Evans and Dr. Maxwell Bresler, one of the professional consultants to the Borrow Dental Milk Foundation.

This letter is submitted for the reason that we would like to assure your readers that the aims and objectives of the Borrow Dental Milk Foundation are primarily to promote the many known advantages of fluoride to strengthen the teeth of children during the formative years and make them more resistant to dental caries.

It is hoped this letter will help to dispel any thought that this Foundation, because of its aggressive stance against water fluoridation, would want to alienate the dental profession in Canada.

Both water and milk are considered to be two of the accepted vehicles for fluoridisation and the relative facts as we know them are compared for the benefit of those responsible for either these two methods being adopted or perhaps others: e.g. tablets, chewing gum, mouth rinses and domestic salt.

The Foundation recognizes that water fluoridation is an accepted policy but not necessarily the exclusive method recommended by W.H.O. and the F.D.I. with its 75 Member National Dental Associations. However, statistics show that only 10 per cent of the world's population is able to receive fluoridated drinking water (I agree that in Canada available figures for 1974 show approximately 33½ per cent receive fluoridated drinking water.)

In recent years the W.H.O. has also stated that there are many areas in 75 per cent of its member countries where there is no piped water supply. It is in these circumstances that the Foundation feels that milk could be a practical alternative vehicle to introduce fluoride systematically to children almost from

birth upwards. To this end the Foundation is at present supporting with equipment and finance research programmes, clinical trials and pilot schemes for no less than eleven projects in the following countries — Hungary (2), Brazil (2), Israel, Egypt, South Africa, Scotland, Italy, Iraq and Iran and the results of these schemes will be collated and published when the programmes have been completed and will undoubtedly show that milk is an appropriate vehicle for fluoride to be given to children as a caries reducing measure.

I should also point out that in the event of milk not being available, water, flavoured or otherwise, could equally well be used in the apparatus for accurate measurement and introduction of the fluoride and its distribution. You will, I am sure, not deny that in almost every country there are anti-fluoridationists with emotional, political and scientific reactions against mandatory water fluoridation. The voluntary acceptance of an alternative controlled vehicle is one answer to this problem.

I can assure you neither I nor any of my colleagues associated with the Foundation have any wish to alienate the health professions in the quest for the prevention of dental disease and the establishment of dental health, and if this is the case in Canada or any other country I would hope that these explanations will remedy the situation.

*E. W. Borrow,
Founder Trustee,
Borrow Dental Milk Foundation,
Portsmouth, England*

It appears obvious to me that the Borrow Dental Milk Foundation seems to have changed its attitude, at least for Canada, since Dr. Evans wrote to them on 1 June, 1977. There is a distinct softening in the letters that have come from Phyllis Deakin since then.

Now, the publication of Dr. Evans' letter, and the one it answered in the CDA Journal's August issue, has had the good effect of bringing an explanatory letter to you from Mr. E.W. Borrow. It is good to know that he does not wish to alienate the dental profession in Canada and that his foundation believes that fluoride can strengthen teeth during formative years.

The only question is the use of milk as a vehicle. He called it an "accepted" vehicle. However, in a recent letter, Phyllis Deakin said that WHO has recognized milk "as a potentially suitable vehicle" for fluoride. What do dental scientists say?

Dr. John Stamm of McGill says that fluoride in milk is nearly as effectively absorbed as fluoride in water. Fluoride in milk is more slowly absorbed by the small intestine than fluoride in water but the total absorbed by the body is about the same. He says that studies of fluoride in milk have been fairly short.

Dr. Ralph Burgess of Toronto says that it is true that fluoride is just about as readily available to the body in milk as in water, but the question still remains as to whether it reduces tooth decay as effectively as fluoridated water. He says also that all studies to date of fluoride in milk have been short-term and that several more years are needed to determine an accurate picture of caries reduction in children drinking fluoridated milk.

I trust that Mr. Borrow can become a friend of dentistry in Canada. If I understand correctly, I seem to see hope for the future in the reference to milk, as a possible vehicle for fluoride, to use in countries, or parts of them, where piped drinking water is not available. I believe it should not be considered as a substitute in any place where water fluoridation is practicable. But, where fluoridation is not feasible,

Continued on page 560

Kulzer:



Estilux[®] microfill

UV-curing composite for the restorative dentistry

Estic[®] microfill

Composite for the restorative dentistry

With the new dental material Microfill, the blending of anorganic and organic components down to sub-microscopic zones was successfully achieved for the first time.

The anorganic component of Microfill is pyrogenic silicic acid (with a grain size 100 times finer than that of any filler used in dental materials to date), giving the new material the following outstanding properties:

- high abrasion resistance in the mouth
- polishable to extra-bright finish
- extreme compressive strength

The organic component is of the reliable Bowen monomer.

New standards for composite filling materials have been established with the composition and properties of Estilux microfill.

The homogeneous blending of the anorganic filler with the matrix results in highly abrasion-resistant fillings with permanently smooth surfaces. The hazard of plaque formation is reduced.

Indication

Anterior teeth:
cavities class I, III, IV, V per Black

Posterior teeth:
single surface fillings.

Pulp protection is required.

Material

Estilux microfill is a preactivated one-component material ready for use out of a syringe. As activation and mixing are not required, discolourations caused by porosity through manual mixing are eliminated.

The mode of dispensing Estilux microfill from a syringe*) is hygienic and economic. The storage stability of the material is at least twelve months.

The viscous and mouldable consistency allows easy application together with a high degree of adaptability to the cavity walls.

Estilux microfill is applicable and mouldable without time restriction. The polymerization mechanism is triggered only by UV radiation.

Up to a maximum layer of 1,5 mm of Estilux microfill can be cured in 20 seconds by using the light unit Duralux.

Even prolonged exposure periods will not allow thicker layers. Deeper cavities require therefore application and curing in layers.

Estilux microfill Colours

- G = Grey
L = Light
Y = Yellow
GO = Green/Grey intensiv
YO = Brown/Yellow intensiv

Estilux microfill: Physical Properties	
Compressive Strength	400-450 MPa ≈ 4000-4500 Kp/cm ²
Flexural Strength considering ISO/DIS 4049 Standards	75-100 MPa 75-100 N/mm ²
Total Filler Content	75,0 % by weight
Anorganic Filler Content	51,0 % by weight
Water Absorbtion	15 mg/cm ³
Solubility	3 mg/cm ³

Standard-package

20 gr paste = 8 syringes ea 2,5 gr
colours: G, L, Y, GO, YO (G, Y, GO 2 x)

Estic microfill is supplied as base paste and catalyst paste. Both pastes are supplied in syringes and are dosed at the ratio of 1:1.

Processing

The processing and curing time is dependent on temperature.

Processing time:

2½ minutes after finishing mixing.

Curing time:

4 minutes at 30°C mouth temperature after finishing mixing.

From the syringe, Estic microfill base and catalyst pastes are put onto a mixing pad (mixing ration 1:1) and mixed with a spatula within 25 secs. The result is a homogeneous and viscous material which can be applied immediately with a metal application instrument.

Finishing and polishing will give Estic microfill an extra bright finish.

Estic microfill: Physical Properties	
Compressive Strength	410-450 MPa ≈ 4100-4500 Kp/cm ²
Flexural Strength considering per ISO/DIS 4049	80-100 MPa 80-100 N/mm ²
Total Filler Content	75,0 % by weight
Anorganic Filler Content	51,0 % by weight
Water Absorbtion	15 mg/cm ³
Solubility	3 mg/cm ³

Standard-package

20 gr paste = 8 syringes
4 x 2,5 gr base paste
4 x 2,5 gr catalyst paste
colours: G, L, GO, YO



WRIGHT DENTAL
DIVISION OF THE WORLDWIDE WRIGHT DENTAL GROUP
OR YOUR LOCAL DEALER

*) Direct application from the syringe is not recommended

DONALD RIFE INSTALLED AS PRESIDENT OF CDA

Donald L. Rife of Toronto was installed as President of the Canadian Dental Association on October 26 during the 65th Annual World Dental Congress of the Fédération Dentaire Internationale. The Congress, sponsored by the Canadian Dental Association, was held in Toronto, October 22-28.

A native of Toronto, Dr. Rife served for more than five years in the Canadian Dental Corps during World War II as a dental assistant and, mainly, as a dental technician. Following his graduation from the University of Toronto's Faculty of Dentistry in 1950, he entered private practice, generally restricting his practice to dentistry for children.

Dr. Rife conducted a practice limited to children for 18 years and, during part of this period, was a member of the American Academy of Pedodontics. He returned to a family practice of general dentistry in the spring of 1975.

Dr. Rife has served organized dentistry in many capacities. He is a member and past president of the Canadian Society of Dentistry for Children, a member of the American Academy of Dentistry for the Handicapped, a member of the Fédération Dentaire Internationale and a member of the Ontario Dental Association.

In addition to being President of the CDA, Dr. Rife holds the following elected offices: member of the Council of the Ontario Chapter of the Canadian Society of Dentistry for Children; National Secretary-Treasurer of the Canadian Society of Dentistry for Children; member of Council for the North Toronto Dental Society; and, a member of the Board of Governors of the Ontario Dental Association.

Along with his involvement with professional dental organizations, Dr. Rife is a member of the Canadian Power Squadrons and the Royal Philatelic Society of Canada, among others.

The installation ceremony took place during a special luncheon at Toronto's



Dr. Donald Rife (right), newly-installed President of the Canadian Dental Association, is congratulated by Dr. A. J. Harris, President of the Ontario Dental Association.

Harbour Castle Hotel. Representatives of all the provincial dental Associations, universities and licensing boards from across Canada were in attendance along with representatives from the Fédération Dentaire Internationale and invited members of the dental profession.

In his acceptance address Dr. Rife discussed the state of the dental profession in Canada today and provided a close look at the current achievements and future plans of the National Association. The following is a condensed version of Dr. Rife's address:

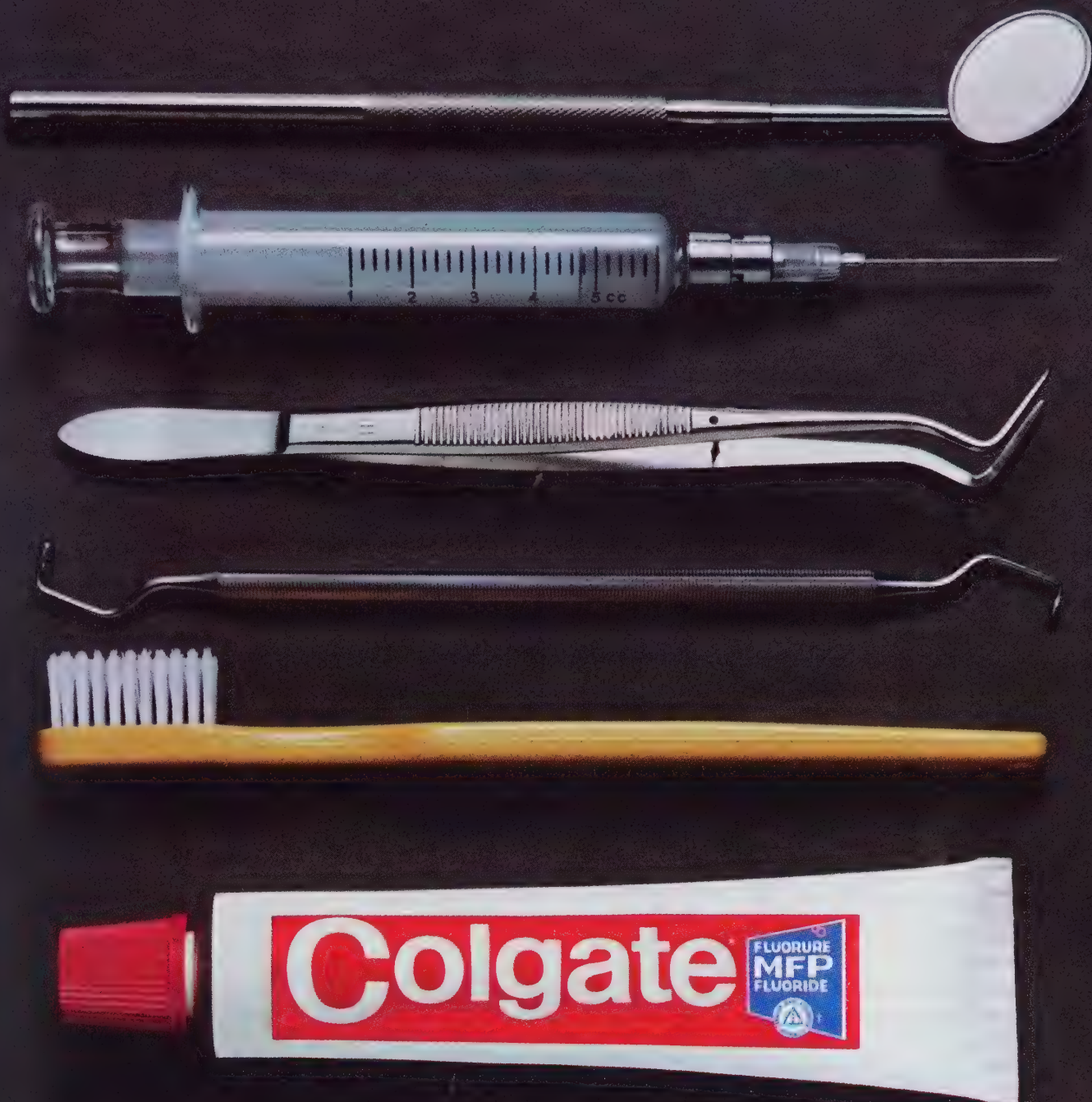
"Gone are the days when a professional body functioned having something less than direct contact with the public and government, and a degree less than candor and frankness with its own membership.

"The Canadian Dental Association is in the midst of an uphill climb of achievement. It was brought about several years ago, by decisions made by

the Board of Governors to review the purpose and structure of the Association, and, to seek to re-dedicate all activities of CDA in a new appreciation of the requirements of the profession of dentistry and all its members. Concurrent with this self re-appraisal, were governmental actions in two Provinces that required membership in professional associations be on a voluntary basis.

"These have been difficult years. Difficult because it is always hard to give up some things and equally torturing to be bold and start something new. CDA has achieved a reformation of purpose and dedication and has done so without the need for a sanguine revolution.

"What of the present state of the Association? Your Association has been brought to structural and financial soundness. It has re-dedicated itself to serve and protect the interests of our profession and it has challenged us all



Tools of the Trade

Colgate's Special MFP Fluoride provides continuing protection against cavities between check-ups.

The fluoride treatment you give gets our patients off to a good start. But it's important that they brush with an effective fluoride toothpaste, like Colgate, so they're fighting cavities between check-ups too.

Our clinical tests show that the regular use of Colgate with MFP fluoride alone significantly reduces the number of new cavities. Used in conjunction with your topical fluoride application,

it follows that there should be an even greater reduction of cavities.

How does Colgate's special fluoride MFP fight decay? We believe that MFP* (sodium monofluorophosphate) is effective in converting the surface layer of apatite (calcium hydroxyphosphate) into fluorapatite (a calcium fluorophosphate) thus making the tooth more resistant to decay.

Colgate's MFP is stable. Even after

three years the sodium monofluorophosphate is still present and able to react with tooth enamel.

And it's reassuring to know that staining of teeth, a problem associated with some dentifrices is not a problem with Colgate's MFP.

You might remind your patients how important it is to back-up your fluoride protection...with the kind that Colgate's special MFP fluoride provides.



"Colgate has been shown to be an effective decay-preventive dentifrice that can be of significant value when used in a conscientiously applied programme of oral hygiene and regular professional care."

*TM

Canadian Dental Association.

Colgate-Palmolive Canada.

to become true professionals. We have a new constitutional concept of representation, based on regional membership contribution Boards, Councils and Committees from across Canada. We have made provision for greater and direct membership participation and access to everything in the Association. The 'business' and money matters of CDA are conducted and reported under new audit features which includes zero based budgeting and in-depth reporting via financial statements. We offer to you right now the greatest package of protection insurance at the least cost (in some places 25 to 40 percent *less* than you were paying for inferior protection last year) that has been available to anyone in any professional group in Canada. This includes Group Life, Office Overhead, Sickness and Accident and Malpractice Insurance.

"We have accorded to our student members the authority, rights and privileges to which they are entitled with the creation of a Council on Student Affairs.

"We have put together a package of procedures for dealing with third party dental prepayment plans. It is the envy of the industry elsewhere, and we have done so in an atmosphere of hard, but honest and sincere, negotiation for which all dental insurance carriers and all dental association representatives can take pride. Moreover we all remain good friends. The members of your Board and Executive Council have achieved this remarkable situation respecting these and many other matters, by plain hard work and unstinting contribution of time and talent. For this, I suggest that you pay tribute to them individually, whenever you meet and talk.

"What then for next week and the months to follow?

"We have embarked on a major review of taxation as it affects the profession and the strictures and unwarranted encumbrances it places upon the practice of dentistry, upon investment in our professional practices, upon incorporation of practice, upon purchase of materials and capital investment and upon expansion of employment in our offices. This will

not be a sort of window dressing committee, looking good in print and sounding like a "good thing" but rather, an action committee, reviewing continuously, the features of taxation casting its spell on the profession, and transfixing us with its inertial stagnation. Reinforcing all this, will be the creation and activation of a Government Liaison Committee whose purpose will be to establish a relationship with government on a continuing basis so that, in concert with all segments of our profession, we may dialogue and present our proposals to government in an atmosphere of trust and recognition.

"We propose, very shortly, to remove a major portion of our indebtedness relating to the construction of our new headquarters. Each saving of interest payment, or creation of interest on our cash flow, means that another program on behalf of our members can be instituted.

"We have restructured our preventive programs, particularly in reference to Dental Health Week. We will have new material, including TV spots, and a whole new batch of posters and handouts.

"Our new vehicle "Communique" will keep you up-to-date on information that demands circulation faster than can be afforded by the Journal. If that isn't quick enough, or, the news is more urgent, we may even send you a special letter. We are completely revamping all CDA pamphlets. We are restructuring, expanding and clarifying the whole program of accreditation.

"I would like to call this approaching twelve months "Homecoming Year", yet it would be tempting fate surely to assume that renovations of the type recommended could be achieved in one year. Let me suggest to you then, that we could embark on a Homecoming Era, during which those parts of association dentistry which have become detached from the main stream of activity of the national professional organization, be encouraged and welcomed to re-affiliate closely with CDA.

"I offer you some examples for your consideration:

"The National Dental Examining Board could, in my estimation, serve

the profession, government and licensing bodies *better* if its relationships with the Canadian Dental Association were stronger and direct. The Certificates of NDEB would undoubtedly be of enhanced meaning under these circumstances.

"The Canadian Fund For Dental Education would gain new perspectives and strength through a homecoming, especially in its administrative aspects. Trustees of the Fund would gain greatly through having added net revenue for dedication to educational projects.

"The Royal College of Dentists of Canada and the Canadian Dental Association would both be enhanced measurably by a relationship stronger and closer than that which exists at present. Having been involved in the drafting of the original concepts and precepts which culminated eventually in establishing the RCDC, I was dismayed at the time, and have continued to remain dismayed and perturbed, that the RCDC was created in its final form as an organization independent of the Canadian Dental Association. This situation continues as a matter of extreme anguish and concern to me.

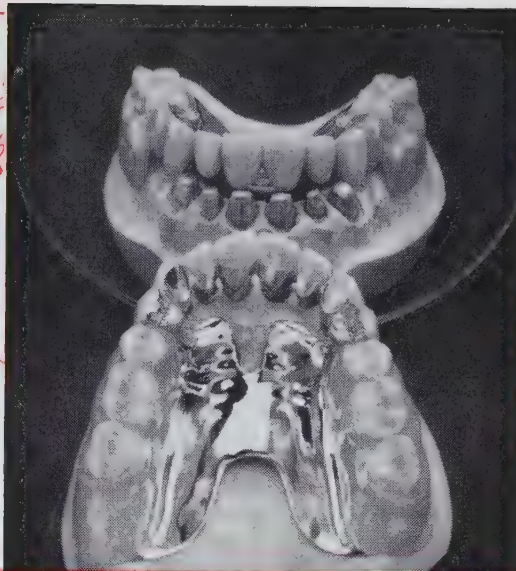
"The Corporation known as Canadian Dental Service Plans Incorporated can become something much greater and of heightened importance to the profession of dentistry than it is even to-day. I would like to see this Corporation become the monetary medium of Canadian Dentistry potentially through which we could provide Management Services, computer data processing and other banking, record keeping and accounting services as are provided by Caisse Populaire and Credit Unions.

"If tax laws can be amended, we could provide Annuity Plans and retirement services to the profession via CDSPI just as we are now able to offer insurance plans. To accomplish this, it is my feeling that an enhanced structured relationship between CDSPI and CDA could be achieved via a direct corporate relationship between the two organizations.

"An extension of "Homecoming" should be considered by other dental organizations.

Continued on page 556

There's a Nobilium laboratory near you



A MARI USQUE AD MARE: FROM SEA TO SEA



Wherever you practice there is a Nobilium laboratory nearby . . . ready to process your partials with the "aristocrat of chromium

alloys" . . . partials that satisfy every patient desire for dependable fit, functional service, oral comfort and lifelike aesthetics. Here is the list of skilled laboratories from British Columbia to Nova Scotia equipped with the latest Nobilium equipment and materials and dedicated to serve your every requirement. Entrust your prescriptions to them with confidence.

ONTARIO — TORONTO

Duracast Dental Laboratories
8 Taber Road, Rexdale

Hirsh Dental Laboratories Limited
495 Adelaide Street West

Modent Dental Laboratory
881 Eglinton Avenue West

Pearce Dental Lab
250 Lawrence Avenue West

**The Posen & Furie
Dental Laboratories Limited**
1366 Bathurst Street

Walter Wood Dental Laboratories
527A Bloor Street West

ONTARIO — HAMILTON

**Allen & Rollaston
Dental Laboratory**
Medical Art Bldg., Hamilton 20

ONTARIO — St. CATHARINES

J. W. Birnie Dental Lab.
206 King Street

ONTARIO — CAMBRIDGE

Achmann Dental Lab.
87 Grand Ave. South

ONTARIO — ORILLIA

Orillia Dental Laboratory
225 West Street North

ONTARIO — OSHAWA

Multi-County Dental Laboratories
172 King Street East

BRITISH COLUMBIA — VANCOUVER

**Northwest Dental Laboratories
Limited**
1070 Homer Street

BRITISH COLUMBIA — VICTORIA

Turner Dental Laboratory
1207 Douglas Avenue, Suite 521

NOVA SCOTIA — AMHERST

**Walter Horton
Dental Laboratories Limited**
31 La Planche Street

ALBERTA — CALGARY

Pro-Dent Lab. Ltd.
6707 Elbow Drive S.W.

Frame Master Lab.
339 - 6th Avenue S.W.

MANITOBA — WINNIPEG

**Associated Crown & Bridge
Laboratory, Limited**
201 - 407 Graham Ave.

Manitoba Dental Labs.
333 Kennedy St.

ALBERTA — EDMONTON

Northwest Dental Laboratory
10540 - 115th Street

Universal Dental Laboratories Ltd.
10066 Jasper Avenue

New-Johnston Dental Labs.
10202 - 102 Street

SASKATCHEWAN — SASKATOON

Aurum Crest Dental Laboratories Ltd.
336 - 6th Ave. North

QUEBEC — STE. THERISE

Lafond & Joly Dental Lab.
94 Blainville Ouest

QUEBEC — GRANBY

Julien-Ste. Jean Dental Lab.
356 Rue Principale

QUEBEC — MONTREAL

Dentarium Laboratories
6997 Victoria Avenue

Nobident Dental Laboratory
3726 Jean-Talon West

Roger Sauve Dental Laboratory
5545 Beaubien Est

QUEBEC — QUEBEC CITY

G. Garneau Dental Lab.
386 Dorchester, Sud

NOBILIUM PRODUCTS OF CANADA, LIMITED 1366 BATHURST STREET, TORONTO 4, CANADA

"I hope that the Canadian Chapters of the American Society of Preventive Dentistry will give serious thought to Group Status within the structure of CDA. Such an arrangement would provide the Chapters of ASPD with a direct voice in matters of national dental interest, and would afford CDA of a resource organization on matters relating to prevention and preventive dentistry.

"The Academy of General Dentistry has for many years been in the forefront of those advocating advancement of the practice of general dentistry and promoting improvement of individual skills and proficiency in the profession. What a welcome addition to the National organization of dentistry (CDA) would be the affiliation of the Academy of General Practice via Group Status in CDA.

"In short, homecoming makes very good sense from any aspect of analysis, and should be a matter of medium and long term initiative for CDA.

"Much has been omitted because of time in this forecasting. What then remains? I believe that we have not addressed ourselves properly to our professionalism. What is Professionalism? In brief, professionalism has five basic features, according to Dr. M. L. Mader of the Ontario Medical Association.

"By definition:

1. The theoretical thesis upon which it is founded.
2. The Authority to establish what is good or evil for a patient. (It remains however the choice of a patient to accede to that judgement.)
3. The sanction by the community, of its powers and privileges over training, licence, and confidentiality.
4. A monopoly over ethical codes, the client to professional, and colleague to colleague privileges and powers.
5. A culture, devoid of being a means to an end, but a career system of values, norms and symbols functioning through formal and informal groups.

"In the past, professionals were "learned persons" holding a monopoly over a valuable product. Their perform-

ance was expected to be high because of their service ideal. They hold autonomy because society was convinced that no one else could do the job, or should be permitted to try.

"Not so today. None speak of the "learned professions". Few think professionals have unusual competence, or understanding of society's affairs. They are not regarded as natural leaders or influential members of society. They have become "experts", that is, persons of high competence in a restricted sphere. The change is not a transformation but a disintegration of the traditional concept of a professional.

"We are being pressured at an ever increasing rate, by contemporary society and, in respect of the five categories of professionalism I listed earlier, the situation is becoming *dangerous*. We have free professionals working under superiors whose orders come from government. What happens when the professional's "professionalism" clashes with the commands issued from above and backed by the unlimited power of the state? No wonder in a totalitarian state, the professional is the first to be subjugated or eliminated.

"What of those persons having little or no formal training and no professionalism, who are being unleashed upon an unsuspecting public, in response to an implied but unsubstantiated political or economic need.

"Lord Hailsham states that our most valuable possession, which is our integrity and our independence of judgement, is under threat.

"I suggest to you therefore, that in the long term, CDA must review our standard of ethics. We must join with other professionals in a common effort and proclaim our philosophy of life, and the individual contribution which professional persons make to society at large. We have no class antagonisms. The price of freedom is uniformity of treatment, unswayed by a variety of needs, dictated by economics, and oriented to political advantage.

"CDA must identify common standards of excellence, *not* least common denominators of performance. We must support and reinforce our dedication to public service. We must truly

serve and protect our membership and instill in all our members a true sense of professionalism.

"We must somehow and finally convey the message of our very existence — that dental *health* can be a way of life, if an individual will listen and act with some concern for his personal well-being.

"To conclude, thank you for your trust by conferring upon me the symbols of office of President. God willing, and, with the reinforcement and love of my family, whose consent, encouragement and support is vital to me, I hope to report to you in one year on a successful stewardship.

CORRECTION

In the October issue of the Journal, we published an article by Dr. W. J. Dunn, President of the Association of Canadian Faculties of Dentistry, entitled "Since what we choose is what we are. . . ." In the third paragraph of the article we inadvertently omitted a line which confused the meaning of the paragraph. The paragraph should have read as follows:

"All of Canada's ten dental schools conduct their programs as integral components of publicly-supported universities. Perhaps that fact permits the inference, seemingly obviously taken by a majority of the profession, that the financing of dental education, apart from tuition fees, should be entirely a public responsibility through tax-supported governmental agencies of one kind or another. And there can be little doubt that if the total resources available to the dental schools were derived from tax dollars the schools would not close their doors. But what about the measure of excellence? The evidence is pervasive that as a consequence of the effectively responsible trusteeship of non-restricted funds from philanthropic sources, by far the most important of which, in this country, has been The Canadian Fund for Dental Education, the schools have been able to achieve and maintain standards of dental education which, somewhat immodestly perhaps, we believe are comparable to the best in the world."

We apologize to Dr. Dunn for this error.



Participants and sponsors of The Canadian Student Table Clinic Program gathered for this photograph following the FDI opening ceremonies on Sunday evening, October 23. Seated, left to right: Dr. Maynard K. Hine, President of the Fédération Dentaire Internationale; Lynda Nicholson, Laval University; Mr. Henry M. Thornton, Chairman of the Board and Chief Executive Officer of Dentsply International; Carol Haeberle, University of Alberta; Dr. Michael J. Cripton, President of the Canadian

Dental Association and Rina Weiszner, University of Manitoba. Standing, left to right: Donald E. Noble, University of Western Ontario; Harold Weiss, University of Saskatchewan; M. Gilles Riendeau, University of Montreal; Douglas J. Vincelli, McGill University; Paul Belzycki, University of Toronto; Colin A. MacPhee, Dalhousie University and Stanley T. Soon, University of British Columbia.

CANADIAN STUDENT TABLE CLINIC PROGRAM

The Seventh Canadian Student Table Clinic Program was held in conjunction with the 65th Annual World Dental Congress of the Fédération Dentaire Internationale from October 22 through 28 in Toronto. The Program was again sponsored by Dentsply Canada, Ltd., through a special grant made to the Canadian Fund for Dental Education.

This year's Program for Canadian students marked the seventh consecutive year that the Council on Education of the Canadian Dental Association has conducted the clinics and all ten Canadian dental schools were represented.

Students received an expense paid trip to Toronto to present their table clinics after placing first in their school's Spring Table Clinic Program. In those schools without such a program, the Dean of the dental school was invited to select an outstanding student clinician to participate in the annual event.

Under the definition established by the Council on Education, a table clinic is a table top demonstration of a technique or procedure concerned with some phase of research, diagnosis or treatment related to the profession of dentistry.

Students participating, their schools and clinic titles were: Paul Belzycki, University of Toronto — "The effects

of tetracycline on calcium distribution;" Carol Haeberle, University of Alberta — "Dental caries and tooth susceptibility;" Colin A. MacPhee, Dalhousie University — "Pathology related to third molars;" Lynda Nicholson, Laval University — "Grefe de dentine;" Donald E. Noble, University of Western Ontario — "Biopsy: An important diagnostic tool;" M. Gilles Riendeau, University of Montreal — "Bond strength — plastic teeth — denture base;" Stanley T. Soon, University of British Columbia — "Single visit formocresol pulpotomy technique;" Douglas J. Vincelli, McGill University — "Xeroradiography in dentistry;" Harold Weiss, University of Saskatchewan — "The uniqueness of root surface caries;" and Rina Weiszner, University of Manitoba — "Horizontal jaw relations for edentulous subjects."

A reception and dinner honoring participating student clinicians was hosted on Sunday evening, October 23 by Mr. Henry M. Thornton, Chairman of the Board and Chief Executive Officer of Dentsply International, representing the sponsors. The dinner was held at the Sheraton Centre and was attended by approximately one hundred persons including student clinicians, Deans, faculty advisors of Canadian dental schools and special

guests representing the dental profession and dental education.

Honored guests at the head table included Dr. Maynard K. Hine, President of the Fédération Dentaire Internationale; Dr. and Mrs. Michael J. Cripton, President of the Canadian Dental Association; Dr. and Mrs. Frank P. Bowyer, President of the American Dental Association; Dr. and Mrs. Harold H. Hillenbrand, Executive Director Emeritus of the American Dental Association and a Trustee of the Canadian Fund for Dental Education; Dr. and Mrs. John W. Neilson, Chairman of the Canadian Fund for Dental Education; Dr. Geoffrey Howe, Dean of the Royal Dental Hospital of London, England and Dr. Ralph Y. Barolet, Three Year Elected Member of the Board of Governors of the Alumni Association of Student Clinicians — American Dental Association (SCADA) and Faculty Advisor at Laval University.

The student clinicians were recognized during the official opening ceremonies of the Fédération Dentaire Internationale held on Sunday evening at the Harbour Castle Convention Centre. On Tuesday, October 25, the students presented their clinics at the Automotive Building of the Canadian Exhibition Place for the benefit of those attending the FDI Congress.

CANADIAN DENTAL RESEARCH FOUNDATION AWARD



Dr. Michael Cipton, Immediate Past President of the Canadian Dental Association, presents the Canadian Dental Research Foundation award to Dr. Charles A. Smith of Quebec.

The \$500 research prize of the Canadian Dental Research Foundation was awarded to Dr. Charles A. Smith of Quebec during the 65th Annual World Dental Congress in Toronto. Dr. Smith won his award for a research article on "Cellular Renewal in the Enamel Organ and the Odontoblast Layer of the Rat Incisor as Followed by Radioautography using ^3H -Thymidine". His research was carried out at the Faculty of Dentistry of McGill University.

The Foundation's institutional trophy was awarded to the McGill Faculty of Dentistry because the prize-winning research was performed there. Dr. Kenneth Bentley, Dean of the University's Faculty of Dentistry, accepted the trophy, which is a brass-leaved book mounted on an attractive wooden stand.

CDA STAFF

Marg Hideg was appointed to the staff of the Canadian Dental Association in January, 1976, as Council Secretary. In this highly responsible position Mrs. Hideg is charged with the task of providing effective secretarial support to the Board of Governors and Executive Council of the CDA, as well as to all other Councils, Committees and special meetings of the Association.

Within this broad framework of responsibility, her duties include: preparation of the agenda and supporting documents for the Board of Governors' meetings; production and distribution of the Transactions of the Association; updating and distributing Letters Patent and By-Laws of the Association; arranging all meetings of CDA Councils and Committees, including the preparation and distribution of agenda material and minutes; co-ordinating and assisting on special projects initiated by various Councils; co-ordinating and arranging surveys of Hospital Dental Services and Internship programs and updating guidelines and lists of approved programs; updating and distributing Stan-



Marg Hideg

dard Claims Forms to Corporate Members and insurance companies; and, to provide secretarial assistance to the selection committee of the Canadian Dental Research Foundation.

Mrs. Hideg joined the Association in Toronto and moved to Ottawa when the new CDA Headquarters building was opened. Prior to her appointment with the Association, she was employed by Canadian Motors Industries (Toyota) in Toronto where she served as secretary to the Systems Manager and also provided secretarial services to the Service Manager and to Japanese liaison personnel.

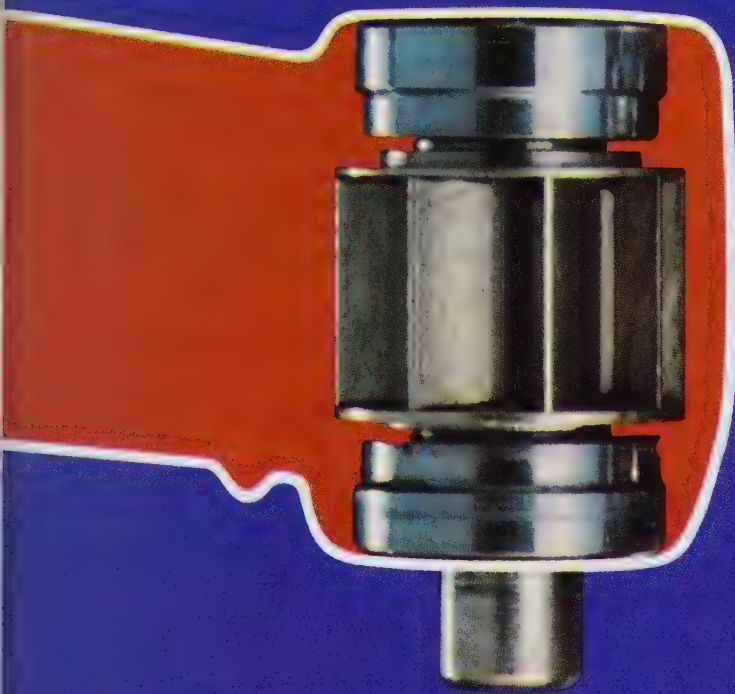
University of Alberta marks Golden Jubilee

This year marks the fiftieth anniversary of the first graduating class of the Faculty of Dentistry of the University of Alberta. The official Golden Jubilee celebration was held Saturday, November 26, with a special day-long program which featured a continuing education presentation, a James McCutcheon memorial lecture, a luncheon sponsored by the Alberta Dental Association and a special convocation to confer honorary degrees.

CDA Board of Governors Meeting

The Board of Governors of the Canadian Dental Association will hold an interim meeting March 13 and 14, 1978, at the Chateau Laurier Hotel in Ottawa.

**For super speed and torque in
a high speed handpiece Dentsply
took a whole new approach
to turbine blade design.**



**Conventional
Turbine**



**Gull WingTM
Turbine**

At the left, the conventional straight bladed turbine.

At the right, the GULL WINGTM turbine. Which is...

Thirty percent *smaller*.

Thirty percent *faster*. Speed to 420,000 rpm.

Significantly *higher torque*. You can feel its power instantly.

See the difference in the turbine blade design? The gull wing configuration achieves a greater "push" from the turbine air and puts more speed and drive into the rotating bur. So you get optimum cutting performance at all times.

Try the GULL WING Handpiece. You will understand why so many are saying it is a true aerodynamic breakthrough.

**DENTSPLYTM
Equipment**



Dentsply International, Inc., York, PA 17405

© 1977 Dentsply International, Inc.
All rights reserved.



**From Dentsply... a great new handpiece called
the GULL WING.TM**

CBC buys animated "Toothbrush Family"

The Canadian Broadcasting Corporation has purchased 20 episodes of the Toothbrush Family, an animated television series based on stories by Marcia Hatfield, an award-winning Australian writer.

The episodes are already seen twice weekly in America on the Captain Kangaroo Show on CBS, and Ms. Hatfield is the first Australian to have a program syndicated by an American network.

The series depicts the nocturnal exploits of characters normally assumed to be inanimate bathroom objects — such as Nev Nailbrush, Tom and Tess Toothbrush, and Cecily Comb and Bertie Brush. It premiered on CBC on November 10 and will be telecast weekly throughout Canada. Each segment is four minutes long and will be seen at 4:24 p.m.

Ms. Hatfield recently attended the 65th Annual World Dental Congress in Toronto, where she discussed the impact the mass media approach of the Toothbrush Family could have on dental hygiene for children throughout the world.

In addition to the cartoon series, the Toothbrush Family characters will soon be seen in books, cassettes, records, jigsaw puzzles and a variety of other products designed to appeal to children.

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association Retirement Savings Plan stood as follows on October 31, 1977:

<i>Common Stock Fund</i>	\$27.106
<i>Fixed Income Fund</i>	\$20.222
<i>Guaranteed Fund</i>	\$14.079

Total assets (market value) of the plan were \$25,546,705.11.

For further information write to: CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ontario M5R 2P2.

Letters . . .

Continued from page 550

perhaps the time will come when fluoridized milk can be considered approved as an additional systemic method of bringing the benefits of fluoride to growing teeth.

*Lloyd H. Bowen,
CDA Fluoridation Officer,
Toronto*

Emphasis on prevention

Every decade or so, we see a new and hopeful trend developing in the practice of dentistry. Recently, it has been the emphasis on prevention, led by such people as Bass and Barkley and dedicated to the idea that patients can be taught to control their own dental disease tendencies.

A new star on the horizon is our own Dr. Maret Truuvert who is saying in a fresh way what we have only half-heartedly believed — that sugar not only harms teeth, but it is not necessary in human nutrition.

In my practice, rather than spend a lot of time collecting diet histories, we simply give each patient a "shopping list" which says:

"These probably cause dental damage: cookies, cake, pie, white bread, sugar, processed flake cereals, jam, jelly, raisins, syrup, honey, ice cream, crackers, biscuits, pop, candy, gum and chocolate. These are best for health: meat, eggs, fish, oysters, clams, cheese (unprocessed), fresh fruit, vegetables, coarse dark bread, butter, margarine, milk, whole grain cereals, nuts and fruit juices."

Each patient, or parent, will decide for himself or herself how far to go along the road towards such a strict diet. They have the knowledge, it's now their responsibility.

May there be more dental teachers like Dr. Truuvert who point out that diet is of equal importance to mineral fluoride supplementation of water supplies.

There have been hopeful signs from Ottawa that, even there, the message is being heard and the myth of sugar being necessary for energy is no longer being taught. We can and do progress.

*D.C.T. Bullen, DMD, DDPH,
Comox, British Columbia*

New purpose for old dental chairs

On a recent trip to England, I was interested to see the base of old dental chairs being used as a base for tables for handicapped persons. These tables were easily raised and lowered by the foot pedal to suit different wheelchairs.

If any dentist in the Toronto area has a functional chair base to donate, I will arrange to have the table made and placed in a home, school or centre on your behalf.

I have worked with physically handicapped children for 10 years.

*June Knapp,
8 Alvarado Place,
Don Mills, Ontario M3A 3E9
Telephone: 447-1945*

Objection to cartoons

I appreciate good cartoons as well as anyone, and I look forward to seeing topical cartoons in the Journal. But do you expect that Canadian dentists have such a low opinion of themselves as to find the two cartoons by Jack Flynn on pages 506 and 510 of the October issue actually funny?

By all means, let's poke fun at ourselves and not be afraid to take a little barb from time to time. At the same time, let's not stoop to parodic portrayal of ourselves in situations conforming to the public's worst images of our profession. If we can't keep our own chosen image straight, how can we expect anyone else to see us as we'd like to be seen?

*R. Wyman, DDS
Mississauga, Ontario*

Caulk[®] Dycal[®]

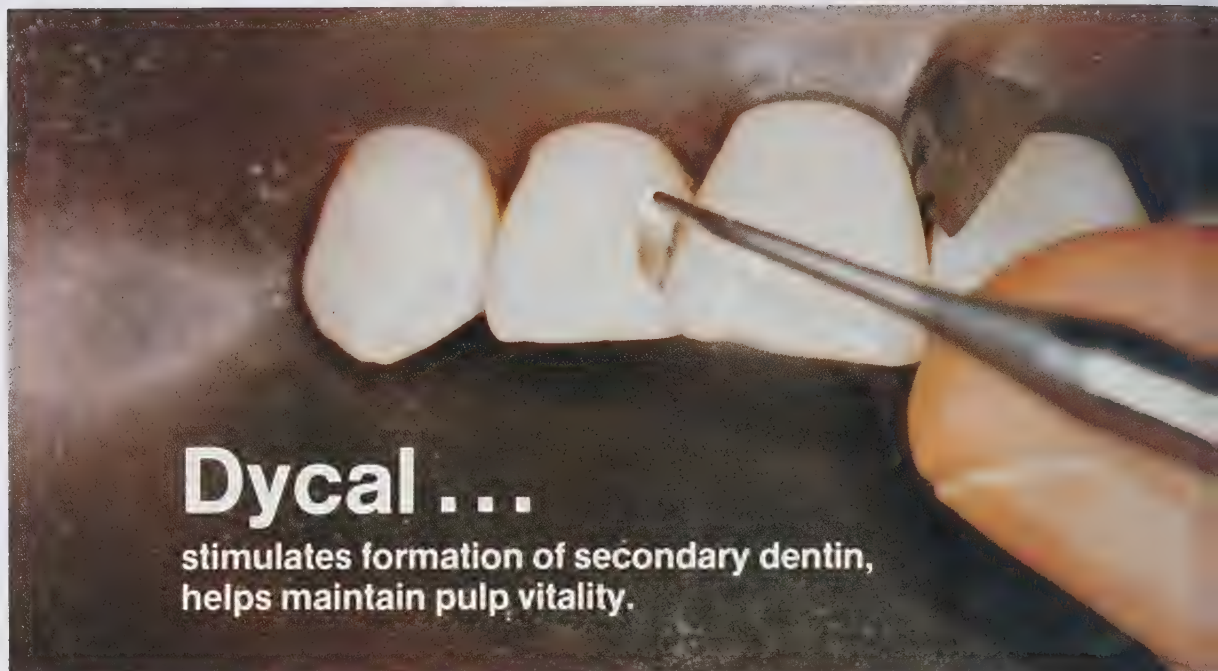
protective base,
pulp cap

Calcium hydroxide
in convenient form and
clinically effective.



561

For more
information
check number 101



Dycal ...

stimulates formation of secondary dentin,
helps maintain pulp vitality.

- Stays where you put it.
- Sets hard fast for placement of restorative material or intermediary base.
- Provides a rigid protective base under amalgam, composite, silicate or resin restorations.
- Safe to place in cases of exposure or near exposure.
- Radiopaque—there's little chance of ever mistaking it for caries.

DYCAL—basic in your operatory.

Caulk making life
a little easier
for dentists

Division of Dentsply International Inc.



For more
information
check number 101

©1975 Dentsply International Inc.

All rights reserved.

Printed in U.S.A.

DR. ROD MORAN PRESIDENT-DESIGNE DE L'ADC

Le Dr R. L. Moran, dentiste renommé de Toronto, a été élu président-désigné de l'Association dentaire canadienne, au cours de la réunion du Bureau des gouverneurs de l'ADC tenue à Ottawa en septembre. Il revêtra sa chaîne de président de l'ADC à la fin de l'assemblée annuelle de 1978, prévue pour Winnipeg.

Né à Port Arthur, Ontario, le Dr Moran obtint son DDS en 1961 à la Faculté de médecine dentaire de l'Université de Toronto. Il a servi au Service dentaire de l'armée royale canadienne de 1961 à 1965 et a continué ses études post-universitaires à l'Université de Toronto, où il obtint un diplôme en pédodontie en 1967. La même année, il obtint son diplôme de spécialiste en pédodontie au Collège royal des chirurgiens-dentistes de l'Ontario.

Egalement en 1967, le Dr Moran est entré en fonctions au Centre des enfants infirmes de l'Ontario (Ontario Crippled Children's Centre) à Toronto à titre de Directeur de médecine dentaire. Il a

servi à titre de consultant en pédodontie à l'Hôpital des enfants malades et il est actuellement clinicien-adjoint au Département de médecine dentaire de cet hôpital et consultant en pédodontie à l'Hôpital général North York. De plus, il occupe le poste de professeur agrégé en médecine dentaire, section de pédodontie, Faculté de médecine dentaire, Université de Toronto.

Le Dr Moran a servi, et continue à servir la profession dentaire organisée dans de nombreuses capacités, notamment: Membre du Conseil, Académie de médecine dentaire de Toronto; ancien président, Association dentaire de l'Ontario; président fondateur, organisme de la santé des étudiants, division dentaire; président, comité d'organisation, Projet Modèle de démonstration (gouvernement de l'Ontario, MD86); membre du comité médical consultatif, Centre des enfants infirmes de l'Ontario; membre du comité consultatif professionnel, Société des enfants infirmes de l'Ontario; membre du Comité d'étu-



Dr. R. L. Moran

des sur la fourniture de soins dentaires pour les personnes handicapées et déficientes; et membre du groupe d'étude du gouvernement de l'Ontario sur les enfants handicapés. Le Dr Moran est membre (Fellow) du Collège royal des dentistes du Canada et il a siégé à l'exécutif de l'Association dentaire canadienne depuis 1975. Il a présenté de nombreuses communications sur la médecine dentaire pour les enfants et pour les invalides.

Outre son adhésion au Collège royal des dentistes du Canada, les Associations dentaires canadiennes et de l'Ontario, le Dr Moran est actuellement un membre actif des organismes suivants: l'Académie de médecine dentaire de Toronto; l'Association dentaire américaine pour les handicapés; l'Académie canadienne de pédodontie; la Société de pédodontie de l'Ontario; la Société canadienne de médecine dentaire pour les enfants; et la 'Omicron Kappa Upsilon Honour Dental Society'.

LES SERVICES DENTAIRES FORCES CANADIENNES

Le Colonel J. M. Donely a été promu à ce grade le 18 juillet 1977 et nommé Directeur-Services dentaires (Soins). Le Colonel Donely, qui a obtenu son diplôme à l'Université de Toronto, a récemment occupé les postes de Commandant de la 35ème Unité dentaire de campagne à Lahr (Allemagne), de Commandant de la 1ère Unité dentaire, à Ottawa et de Directeur des Plans et Besoins, au QGFC.

Le Lieutenant-Colonel V. J. Lanctis a assumé les fonctions de Directeur des

Plans et Besoins le 18 juillet 1977. Le LCol. Lanctis a obtenu ses BA et DDS à l'Université de Montréal, en 1962 et en 1966 respectivement, ainsi que le diplôme du Collège d'état-major des Forces canadiennes en 1973. Il a occupé le poste de Gérant de Carrière pour les officiers dentaires pendant deux ans avant d'être muté à la Division où, parmi d'autres fonctions, il était responsable du recrutement pour le plan PFOD et de la publication du Bulletin du SDFC.

ON INVITE LES DENTISTES A PARTICIPER AUX ACTIVITÉS DE L'ADC

Les rangs de l'ADC ne cessent de s'accroître, ce qui renforce la position de l'Association et facilite le développement des services et bénéfices qu'elle offre aux membres de la profession dentaire. "Il existe de nombreuses raisons très valables pour appuyer l'adhésion à l'ADC", déclare le Dr Lindsay Mussells, président du Comité d'adhésion et ancien président de l'ADC.

Les membres de l'exécutif de l'Association doivent aujourd'hui se soucier constamment de diverses questions essentielles à la profession. L'ADC s'est engagée à faire face aux défis des prochains mois et à faire le nécessaire pour que la profession puisse être considérée à titre de groupe responsable de professionnels, s'imposant avec autorité à l'échelle nationale. Grâce à l'effort conjoint des membres, l'ADC envisage entretenir la liaison avec les organismes fédéraux et les associations provinciales, en vue de protéger les intérêts des adhérents et de la profession dentaire.

Liaison avec le gouvernement

Le climat politique démontre nettement que l'intervention gouvernementale ne diminuera guère en ce qui concerne les activités des associations professionnelles. Ce n'est pas notre optimisme qui diminuera chez nos législateurs l'envie de scruter les activités d'organismes tels que notre Association, "Vu l'attitude actuelle du gouvernement, il est essentiel que l'ADC entretienne et développe ses rapports avec les représentants élus et les fonctionnaires", déclare le Dr Donald Rife, président.

Ces derniers mois, des négociations ont eu lieu dans certaines provinces, indiquant clairement que certains importants changements auront peut-être lieu quant à l'exécution des services dentaires et le statut de la profession. L'ADC tient à surveiller ces développements à mesure qu'ils progressent et à agir rapidement en vue d'informer

tous les membres du Canada de ce qui se passe.

De plus, l'ADC effectuera la liaison avec ses membres dans tout le pays afin d'assurer la diffusion et la considération de toutes les opinions lors des négociations avec le gouvernement.

L'Association reconnaît la difficulté d'entretenir d'étroits rapports avec un grand nombre d'organismes fédéraux à Ottawa. Ce rôle exige persévérance et patience ainsi que la coopération des membres. Et c'est seulement à titre de groupe puissant et uni que l'Association peut progresser en ce qui concerne les importantes questions nationales qui influent la profession.

"Les dentistes du Canada, désireux de voir leur profession maintenir son rôle légitime de groupe respecté et influent, ont le devoir, voire l'obligation de participer aux activités et aux affaires de l'ADC", ajoute le Dr Mussells. "L'adhésion entraîne le privilège de la participation et renforce les efforts de ceux qui ont une responsabilité commune vis-à-vis de la profession, de son statut et de son avenir. Si vous ne faites pas partie de l'Association, l'ADC a besoin de vous. Et, de même, vous avez besoin de l'ADC".

Envergure des activités de l'ADC

Il ne s'agit pas seulement de liaison avec le gouvernement lorsque nous parlons de l'envergure des activités de l'Association et des avantages dont profitent les membres.

L'ADC coopère également activement avec les associations provinciales tout en établissant, pour chaque groupe, un domaine de responsabilité individuelle bien défini.

L'Association reconnaît que la profession doit réserver les droits qu'ont ses membres à agir à titre de groupe autonome. La profession dentaire doit fermement se réserver le droit de définir les normes s'appliquant à l'exécution des services dentaires au Canada; d'établir un tarif équitable de rémunération pour les soins dentaires; et de

participer à la rédaction de la législation régissant le domaine de la santé.

Le Dr Rife conclut: "La capacité de l'Association de fonctionner et de réaliser son objectif est proportionnelle au nombre de membres qu'elle représente. Votre adhésion et votre participation à l'ADC sont essentielles".

Régime d'assurance

L'adhésion à l'ADC comporte tout un éventail de bénéfices. Les membres pourront bientôt bénéficier d'un nouveau régime d'assurance, tout dernièrement conçu. D'importantes améliorations figureront au régime qui offrira, par l'intermédiaire du CDSPI/RSDI, des avantages considérables dont: un plus grand nombre d'options, une diminution des limitations, une stabilisation des primes et la souscription libre.

Le régime de l'ADC n'est destiné qu'aux membres, par l'entremise des associations nationales et provinciales. Le CDSPI/RSDI est chargé de développer, au plus bas prix possible, les régimes qui apportent le plus grand nombre de bénéfices aux dentistes. Le nouveau régime, qui entrera en vigueur le 1er janvier 1978, offrira des primes considérablement plus basses pour la majorité des assurances. De nombreuses nouvelles dispositions ont également été incorporées et les limites maximales ont été élevées; il y aura dans toutes les grandes villes du Canada un service consultatif à la disposition de la profession. Les membres de l'ADC recevront tous les détails s'appliquant au nouveau programme.

L'ADC offre également un régime d'épargne-retraite et le perfectionnement du régime actuel est présentement à l'étude.

Conditions d'adhésion

Les dentistes désireux d'adhérer à l'ADC doivent noter que l'adhésion à une association provinciale est nécessaire pour faire partie du Conseil

Suite à la page 566



Le croissant Trubyte figure sur la face linguale de chaque dent antérieure Trubyte...vous serez donc certain d'obtenir les dents que vous spécifiez...pour que le dentier possède les caractéristiques physiques et esthétiques voulues. Ce croissant est un rappel utile à l'intention des dentistes et de leurs assistantes.

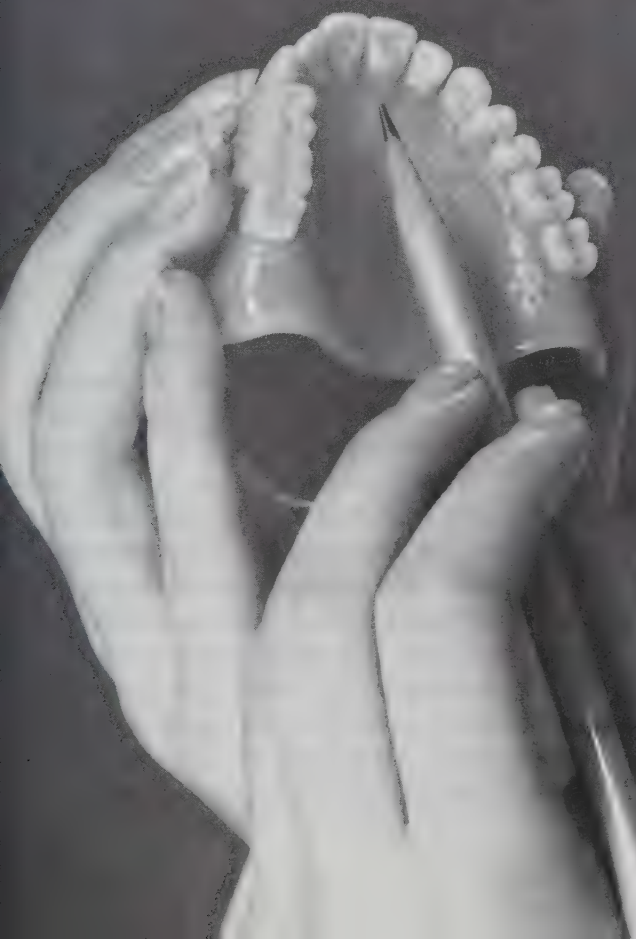
TRUBYTE

Produits de qualité pour la dentisterie.

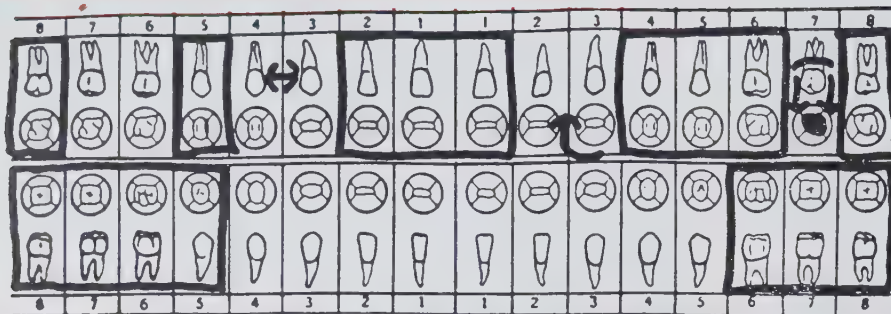
DTM Dentsply Canada, Ltd. Toronto 2-B, Ontario

© 1977 Dentsply International Inc.
Tous droits réservés

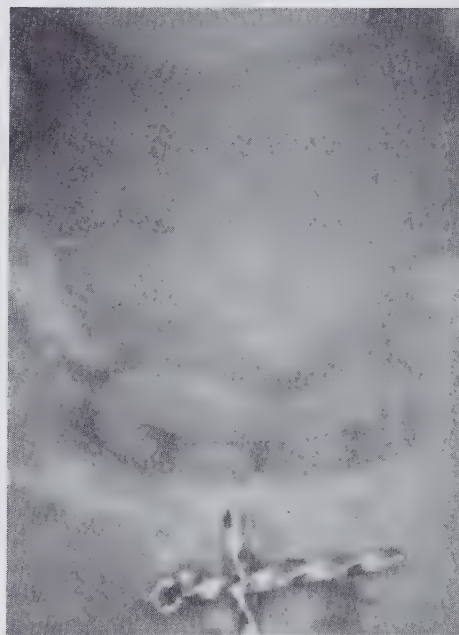
**Si vous spécifiez
des dents Trubyte,[®]
chaque dentier devrait
passer cette vérification
finale avant l'essai.**



A L'AIDE DE LA POLICE



Prothèse partielle enlevée de l'arcade supérieure. On a trouvé un crucifix à l'arrière de la mandibule droite inférieure.



Vue d'en-dessous: la prothèse partielle enlevée de l'arcade supérieure, et vue du côté opposé du crucifix.

Le 16 juin 1977, le corps d'un homme était repêché du Canadian Niagara Power House, au-dessus des chutes canadiennes. Le défunt, un mâle blanc aux cheveux noirs grisonnants, d'une hauteur de 5'8", pèse 200-210 lbs et semble avoir environ 45-55 ans.

La police de Niagara Parks recherche le concours des dentistes du Canada en vue d'identifier cet homme. Le Dr George E. Burgman, de Niagara Falls, a effectué un examen buccal de la victime et constate les faits suivants: (Code international) #13 et 14, espacées; #23, rotation; #27, légère exfoliation amalgame occlusal; partielle — supérieur acrylic, sans crochets; quatre incisives supérieures à la partielle remplacent seulement trois dents manquantes; la partielle porte une #22 mais la #22 naturelle est en place; la dent #24 sur la partielle a la même forme qu'une #23.

Prière de faire parvenir tout renseignement ou toute demande à W. J. Derbyshire, chef de la police, Police de Niagara Falls, C.P. 150, Niagara Falls, Ontario L2E 6T2. Téléphone: (416) 358-1338.

Suite de la page 564

d'administration, pour voter lors d'élections ou pour siéger à un comité. Sans adhérer à une association provinciale, les dentistes peuvent cependant faire partie de l'ADC à titre de membre sans droit de vote, s'ils ont pris leur retraite ou s'ils sont membres en règle d'une autre association dentaire nationale.

Comité sur la taxation

Parmi les récentes activités de l'ADC figure la création d'un comité qui étudiera le domaine de la taxation. Ce comité étudie les moyens d'obtenir des modérations fiscales dans le domaine des taxes imposées sur les équipements et les matériaux dentaires. Le comité, auquel siègent le Dr Clyde Covit, Québec; le Dr Robert Hicks, C.B.; M.

John Gillies, directeur exécutif de l'ADO, a déjà obtenu des résultats très satisfaisants et la taxe fédérale des ventes de 12% imposée sur les fournitures utilisées lors de la fabrication de dents artificielles a été supprimée.

Le comité envisage de poursuivre son travail dans ce domaine et de faire réaliser à la profession et aux membres divers autres bénéfices. Il étudie actuellement les exigences s'appliquant à la constitution en corporation et autres modalités concernant la désignation de la classe "petite entreprise".

Bénéfices supplémentaires

L'ADC est un centre de ressources pour ses membres. L'adhésion à l'Association signifie la réception de troussees et de brochures d'information sur la

fluoruration; l'accès aux brochures et aux films concernant l'éducation du public; l'information sur les carrières dentaires et auxiliaires, y compris les données concernant les écoles approuvées de médecine dentaire; les brochures et films d'information concernant les tests d'aptitude; ainsi que des renseignements concernant les programmes d'éducation permanente et les congrès.

L'ADC, organisme très respecté, a une longue histoire. "Un grand nombre de ses membres ont généreusement servi la profession grâce à leurs efforts destinés à perfectionner son statut. Les dentistes canadiens qui appuient l'organisme national et ses activités contribuent considérablement au bien-être de l'ensemble de la profession", termine le Dr Rife.

L'ADC LOUE LE REZ-DE-CHAUSSÉE DE SON SIÈGE SOCIAL

Moyennant un loyer annuel d'environ \$50,000, l'Association dentaire canadienne a loué une surface de plancher de quelque 6,000 pieds carrés au rez-de-chaussée de son siège social à Ottawa.

Le principal locataire, "The Ottawa

Health Services Centre General Hospital" a installé sur un espace de 3,060 pieds carrés, son bureau de "projet" pour la construction d'un nouvel hôpital dont le coût s'élèvera à \$50 millions.

Les organismes "Federation of Medical Women", "Ottawa Dental

Society" et "Educational Health Environment Ottawa Ltd." occupent également des bureaux dans l'immeuble. Aux termes des restrictions de zonage, l'ADC ne peut louer des bureaux qu'à des organismes connexes du domaine de la santé.

Les jus de fruits peuvent être nuisibles

Les chercheurs de l'École dentaire Royal Melbourne en Australie ont découvert que certains jus de fruit, bus à l'excès, risquent d'abîmer les dents.

Lors d'une expérience récente faite à l'hôpital, certains échantillons de jus de citron et de pamplemousse n'ont mis que 30 secondes à érafler la surface d'une dent.

Le Professeur Elsbos Storey, Doyen des Sciences dentaires, a déclaré: "les différentes marques de jus de fruit présentent de grandes variations, mais la plupart de ces jus sont acides et certains sont extrêmement acides. Les personnes qui en boivent de huit à dix verres par jour risquent vraiment d'abîmer leurs dents."

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 31 octobre, 1977:

Fonds d'actions ordinaires	\$27.106
Fonds à revenu fixe	\$20.222
Fonds avec garantie	\$14.079

L'avoir total (valeur marchande) du régime se montait à \$25,546,705.11.

Pour de plus amples renseignements, veuillez écrire à CDA-sponsored Pension and Insurance Plans, 234 St. George Street, Toronto, Ontario M5R 2P2.

Statistiques vitales

Un sondage effectué récemment auprès des dentistes a révélé que 34% des dentistes s'approvisionnent actuellement chez des compagnies qui font leurs expéditions par la poste... et la principale raison de ce phénomène, ce sont les prix de rabais. Est-ce là une révélation stupéfiante?

Pas vraiment. Des statistiques comme celles-ci, publiées à la suite d'un sondage, on peut les comparer à un maillot de bain de femme... ce qu'il révèle est peut-être très intéressant, mais c'est ce qu'il cache qui compte vraiment! D'autres chiffres moins spectaculaires, mais contenus dans le même rapport, disaient tout autre chose. Près d'un tiers des dentistes qui s'approvisionnent par la poste se plaignent de la "lenteur des livraisons" et du fait qu'il y a "trop de commandes en attente". Parmi les autres plaintes, citons notamment celles-ci: marchandises endommagées en cours de transport; substitution non autorisée d'une marque à une autre, et difficulté à retourner les marchandises... de même que la politique des maisons de vente au rabais, basée sur le principe "pas de crédit"; enfin, en général, un manque de renseignements sur les produits.

Ces dentistes ne lisaient peut-être pas toutes ces clauses imprimées en petits caractères!

Tout bien considéré, Docteur, les économies réalisables en s'approvisionnant par la poste sont-elles réelles... ou illusoires?

C'est là point d'importance vitale.



DENCO

LA THERAPIE MYOFONCTIONNELLE

H. Gaucher, DDS, MScD
Québec

Traduit de l'anglais par Dr. Robert Lambert

L'auteur de cet article, le Dr. Hubert Gaucher, DDS, MScD, est professeur à l'Ecole de Médecine Dentaire de l'Université Laval, à Québec.

Le fait de la traduction de l'anglais, du grand nombre d'idées exprimées, a rendu inévitable un style saccadé mais nécessaire si l'on cherche la concision.

On trouvera la situation actuelle de la myothérapie fonctionnelle telle qu'elle apparaît à l'analyse scientifique, et la conclusion est plutôt négative.

Le Dr Laurent Dufour, spécialiste en dentisterie pédiatrique, Ecole de Médecine Dentaire, Université Laval, Québec, estime cependant que la myothérapie est un "must". Le sujet est donc controversé et, comme le mentionne le Dr Gaucher, il devient nécessaire que les cliniciens fassent des recherches sur le sujet.

Introduction

Une spécialité nouvelle dans le traitement orofacial a surgi au cours des dernières décades et les thérapeutes en myofonction ont cherché la reconnaissance et la coopération de la profession dentaire en exécutant un traitement qui jusque là n'avait pas été administré par la profession en général.

L'objectif de cet article est de présenter les concepts actifs de la myothérapie fonctionnelle, ses buts et son utilité pour le praticien. Les nombreux types d'exercices ne seront pas détaillés ici puisque des volumes appropriés les illustrent davantage.

Au cours de cette information les sujets controversés seront élaborés et plusieurs résultats de recherche seront mentionnés afin d'apporter objectivement le point de vue actuel sur la question du comportement de la langue. On notera que le sujet comme tel est pour le moins discutable et on ne devrait pas être surpris que d'autres questions se posent sans réponse satisfaisante.

Déglutition

Cette fonction s'exerce en moyenne deux fois par minute à l'état d'éveil et une fois la minute pendant le sommeil. Environ 2000 déglutitions s'exécutent en 24 heures, et chacune provoque une moyenne de pression de 3 à 6 livres pendant une période variant de 1/5 à 1/10 de seconde. Consécutivement, de 6000 à 12000 livres de force s'exer-

cent par la langue dans une période de 24 heures. D'où Garliner¹ conclut que la pression par la langue peut déplacer la dentition. Même si ce dernier point est sujet de controverse, la déglutition reste quand même une fonction importante et elle doit être comprise par tout spécialiste dento-facial.

Vers l'âge de 6 ans, la déglutition infantile change en déglutition adulte. Définir ce qui constitue la déglutition normale (adulte) et caractérise la déglutition anormale (infantile) après cet âge, est actuellement controversé.

Pour certains¹⁻³ la déglutition normale est atteinte lorsque le bout de la langue est placé au rugae, à l'arrière des dents antérieures supérieures. Le joint moyen de la langue s'appuie sur le palais dur et la partie postérieure est inclinée à un angle de 45°. Les muscles faciaux ne sont pas utilisés et l'"orbicularis oris" est au repos. Les dents viennent en contact et les muscles masseter et temporaux sont contractés. La pointe de la langue forme un scellement, créant ainsi une pression négative permettant la déglutition.

Les mêmes auteurs déterminent une déglutition infantile lorsque le bout de la langue touche entre ou contre la dentition. Le point médian est effondré et la partie postérieure est élevée contre la portion supérieure du palais dur. La langue ne sert pas à faire un scellement et seul, une contraction de l'"orbicularis oris" permet un faible scellement.

Même si ces descriptions servent de base à l'actuelle myothérapie fonctionnelle, Subtelny⁴ par cinéradiographie, a démontré qu'il existe plusieurs variations à ce qui est accepté comme étant une déglutition normale. Ainsi, le contact des dents peut ou non survenir en déglutition normale, et à plus de 50% on note une activité musculaire périorale. Un certain degré de poussée sur les dents par la langue a été observé. Toutes ces caractéristiques étaient présentes dans les dentitions libres de malocclusion. Il conclut qu'une bonne partie de la controverse au sujet de ce qui doit être traité est en relation avec une définition erronée de ce qu'est l'activité anormale pendant la déglutition. Ceux qui pressent avec la langue avalent effectivement moins souvent que les gens ayant une déglutition normale; cependant, le total de force exercé est quasi identique. Ce fait apporte un doute à la pensée déjà citée de Garliner à l'effet que la poussée sur les dents par la langue peut déplacer la dentition.

Barrett⁵ a établi une règle générale concernant la présence

d'une déglutition anormale. Si la poussée de la langue sur les dents est présente après l'éruption des incisives permanentes, ce doit être considéré comme anormal. A la lumière des constatations de Subtelny ce peut être une sur-simplification du problème.

Genres de poussée linguale

Zickefoose⁶ en offre une classification compréhensive servant de référence pour l'examen des patients présentant cette entité clinique.

1. Poussée antérieure typique: la langue s'avance vers les dents antérieures en avalant, créant et maintenant une béance (open bite). Il y a surplomb horizontal et les lèvres présentent une allure orofaciale normale et le muscle mentalis ne se contracte pas.
2. Poussée antérieure: un surplomb horizontal exagéré avec inclinaison linguale des incisives inférieures et forte contraction du mentalis caractérise cette condition.
3. Poussée bilatérale ou latérale: pas aussi fréquentes que les deux premières, elle présente des difficultés de thérapie car la position de posture de la langue s'insère dans l'occlusion.
4. Poussée antérieure bilatérale: le patient ne mastique que sur les molaires et ceci est accompagné par une posture basse de la langue.
5. Protrusion bi-maxillaire: les incisives du maxillaire et de la mandibule ont été poussées par la langue, et les lèvres supérieure et inférieure sont flasques facilitant ainsi la protrusion.
6. Poussée non dommageable: la bouche est ouverte pendant la déglutition et l'activité de la langue est passive. Cependant, ultérieurement, la détérioration peut survenir.
7. Poussée de classe III: associé à la malocclusion de classe III. La thérapie y est difficile.

Une autre considération dans la classification est le facteur temps. La poussée survient-elle

- a) au début de la déglutition
- b) pendant l'activité verbale
- c) au repos?

Ces conditions sont décelables chez des individus avec ou sans problèmes d'élocution ou de pathologie dentaire.

La recherche sur le comportement de la langue ne peut se faire par électromyographie tandis que la céphalométrie par films de la tête est une méthode subjective. Les expériences neurophysiologiques utilisant les tests stéréognostiques ont démontré des différences individuelles dans les facteurs linguaux sensorimoteurs.

Les transducteurs ont démontré que la position de repos de la langue est probablement plus significative que celle de la déglutition. Tulley⁸ a fait une recherche épidémiologique et trouva que sur 1500 enfants de 11 ans seulement 2.7% présentaient une poussée sévère par la langue. Seulement 1% souffrait de malocclusion nécessitant un traitement. Ces données modèrent les prétentions des thérapeutes en myofonction à l'effet que la poussée par la langue soit une entité

prédominante. Les études par films servent de base à une classification étiologique de la poussée par la langue.

- a) La poussée de la langue est une habitude: Elle est rare passé l'âge de 11 ans. Conséquemment, le traitement doit être retardé s'il n'y a qu'une légère béance. Le positionnement des dents suffira à corriger l'habitude.
- b) Facteur héréditaire: 30% des patients affectés ont une identique histoire de famille. Ce sont les cas les plus difficiles.
- c) La poussée de la langue par adaptation de comportement: Remarquable en classe II, div. I de la malocclusion. Cependant, après le traitement orthodontique, les lèvres se rapprochent et la musculature mentionnée est relâchée.

Etiologie

1. Nutrition à la bouteille: Garliner,¹ adepte renommé de la thérapie myofonctionnelle prétend que nourrir à la bouteille constitue une cause majeure sans toutefois appuyer ses prétentions sur des évidences statistiques. Pour d'autres (5-7) les différences des habitudes de déglutition sont mineures entre les bébés nourris au sein ou à la bouteille. Tulley⁸ n'a trouvé aucune évidence de retard de maturation du comportement orofacial par l'alimentation à la bouteille. Il souscrit davantage à l'idée que la forme de la figure détermine la fonction plutôt que l'inverse.
2. Obstruction au passage de l'air: Les amygdales et adénoïdes volumineuses favorisent une position antérieure de la langue.⁷ On observe également, la respiration par la bouche et des allergies.
3. Hyposensibilité de la luette: Ce manque de sensibilité de la luette force la langue à jouer un rôle anormal dans la poussée de la langue.¹⁰ On ne trouve aucune base scientifique à ce phénomène.
4. Suçage du pouce: Il retarde la transition à la déglutition normale.^{7,5,11,4}
5. Problèmes neuro-moteurs: Peuvent survenir par une mauvaise coordination musculaire.⁷ Le traumatisme cérébral qui affecte le S.N.C. rendrait difficiles les chances de thérapie. Les patients souffrant de paralysie pseudo bulbaire présentent des mouvements paresseux de la langue.
6. Asynchronisme du développement de la langue et de la mandibule: La langue atteint sa maturation avant la mandibule ce qui favorise sa position élevée et antérieure dans la cavité orale.⁷ A mesure que la mandibule croît, l'influence des lèvres augmente. Le développement est donc un facteur.⁴ Après l'âge de 6 ans, la poussée par la langue représente une fixation ou une régression.^{5,12,7}
7. Adaptation fonctionnelle: Le mouvement initial du bout de la langue est dirigé vers l'arrière des antérieures supérieures mais peut déclencher un scellement lorsque la forme craniodentaire est anormale.⁴ Pour certains,⁵ il s'agirait d'une rareté.
8. Désordre psychogène de la langue: Ne joue pas un rôle

significatif dans ces problèmes de la morphologie dentaire. C'est plutôt un résultat de réactions d'anxiété qui ne persistent guère après la puberté. Les procédures de réhabilitation orofaciale peuvent accentuer un conflit émotionnel sous-conscient.¹³

Muscles

La mastication et la déglutition exercent une pression considérable sur les dents et cette pression doit être distribuée également afin d'éviter le plus de stress possible à toute structure buccale. Les dents se meuvent en réponse aux pressions exercées sur elles par les tissus mous adjacents. Une relation occlusale stable est par conséquent associée avec une musculature orale balancée.¹⁴

Contrairement à cet optique on n'a observé aucun contrebalancement des pressions sur les dents, au moyen de légères pressions mesurées intraoralement. La pression de la lèvre et de la langue ne se contrebalancent pas pendant la phonation ou la déglutition. Il n'y a pas de raison de croire que la protrusion incisive ou la largeur de l'arche est en relation avec la pression ou la langue pendant la déglutition, la mastication ou la phonation. Il y a cependant une importante relation entre les pressions au repos et la forme de l'arche.⁷

Une autre étude a évalué la pression exercée sur les incisives centrales supérieures et inférieures par la musculature linguale et périorale. On a trouvé que la langue produisait de 4 à 15 fois plus de pression que la musculature labiale pendant la déglutition. La position axiale labio-linguale n'est nullement soumise à la musculature périorale ou linguale.

La théorie de l' "Équilibre dans la déglutition" est donc mise en doute par ces recherches et des auteurs⁷ en viennent à la conclusion qu'indépendamment de l'activité de la langue, le fait ou la déglutition ne joue qu'un rôle bien secondaire dans quelque influence que pourrait avoir le tissu mou sur la forme des tissus durs. Tulley⁸ conclue que "... plus d'importance doit être faite sur la morphologie du squelette et des structures des tissus mous qui invitent une posture et une activité anormales, que sur les mouvements rapides et transitoires de la langue pendant la phonation et la déglutition."

Heath¹¹ préconise une hypothèse phylogénitique au manque de balancement musculaire observé chez les enfants: les incisives lingualisent pour faire contrepartie au manque de balancement musculaire. Il conclue que c'est la cause première du chevauchement des dents antérieures aux molaires.

Malocclusion

Barrett⁵ doute de ces avancés et croit qu'il n'y a pas de réponse définitive à la question "Les pressions labiale et linguale sont-elles d'une amplitude et d'une durée suffisantes pour bouger les dents?"

D'autres pensent¹² que le comportement musculaire et la malocclusion sont en relation directe. Un palais étroit,

gothique avec des dents en protrusion n'est observé que chez les patients qui n'ont pas atteints une maturité musculaire orofaciale. Ce manque de maturité est donc associé à la malocclusion. Le développement orofacial sera influencé par la poussée de la langue en produisant une relation en pseudo CI III.¹⁶ La triologie de la béance d'occlusion se présente donc par:

le pouce

la langue

les lèvres.¹⁴

Goldberger,³ d'autre part, admet le rôle de la poussée de la langue dans le développement des défauts de phonation. Sur 48 patients en CI II, div. 1, moins de la moitié pouvait se décrire comme poussant avec la langue.

Un autre groupe cependant^{4,7} rapporte que l'information récente n'appuie pas l'idée que la poussée de la langue, en soi, puisse entraîner la protrusion incisive, pas plus que l'idée que ce soit exclusivement relié à la malocclusion de CI II div. 1. En fait, la poussée de la langue est aussi fréquente en CI I, et il n'y a aucune relation de cause à effet. En outre, 80% des béances tendent à se corriger spontanément avec la maturation.

Problèmes associés

A peu d'exceptions près, l'enfant qui blése souffre de déglutition infantile et de malocclusion. Cependant, la blésité n'est pas toujours associée au "tongue thrusting". On croit que les réflexes primaires doivent être renforcés et normalisés avant que les délicates activités phonétiques soient amorcées thérapeutiquement.¹⁷

Puisque la béance occlusale est en relation avec la blésité, il faut, dans ces cas, traiter la malocclusion.¹⁸

Le facteur carie est aussi en relation avec la poussée par la langue. Lundeen,¹⁹ à partir d'études cliniques, en arrive à la certitude que la poussée par la langue prédispose à la carie.

Les problèmes prosthodontiques tels que le manque d'accoutumance à une prothèse, le manque de stabilité, les bris de ponts fixes ont été des résultats directs de poussée de la langue.^{5,20}

On a rapporté des rechûtes dans les traitements chirurgicaux et orthodontiques.¹⁶⁻²¹ La stabilité occlusale et l'équilibre musculaire de la face dépendent de l'habileté au patient à avaler en occlusion.²¹ La périodontite est aussi associée à la poussée par la langue, particulièrement dans les cas de perte osseuse importante au lingual des incisives du maxillaire, et dans le déplacement labial des incisives formant un diasthème sans traumatisme occlusal apparent.¹⁰

Diagnostic

La déglutition infantile telle que décrite par Garliner peut être diagnostiquée chez l'adulte par critères visuel et phonétique avec l'examen physique pour compléter.

Visuellement, on observe une faible structure de la lèvre au repos. Pendant la déglutition le visage contorsionne, la langue glisse antérieurement donnant ainsi l'aspect de

béance occlusale. Il se crée un diasthème, il y a malhabilité au port de prothèse et très souvent rechûte dans les traitements orthodontiques.

Le patient se plaint de problèmes variant de la sensibilité aux dents au lever, jusqu'à la sensation de brûlures à la langue et sécheresse de la bouche.

L'examen révèle aussi un rugae très prononcé et un palais profond, étroit: résultat du manque de friction et de stimulation par la langue. Il y a béance antérieure et postérieure, et parfois protrusion et pseudo Cl III de malocclusion.

Traitement

Ayant donné un aperçu sur la complexité du phénomène de déglutition, (et certains auteurs trouvent le problème mal défini), on donnera maintenant une idée sur le traitement concernant le comportement de la langue.

Les tenants de la myothérapie fonctionnelle^{1,5} cherchent à traiter la déglutition anormale à partir de l'âge de 4 ans. La thérapie comprend la correction du déséquilibre musculaire oro-facial, des habitudes nocives (suçage de pouce). Elle tente d'éliminer l'interférence occlusale qui provoque le stress musculaire.

La nature même du traitement consiste à renforcer et conditionner la musculature orofaciale à l'aide de techniques modifiantes dont les buts² tendant à établir successivement:

1. Évaluation de la poussée de la langue et de sa posture.
2. Conditionnement et positionnement musculaire.
3. Déglutition normale, mastication incorporant la salive.
4. Technique d'habitude de renforcement musculaire.
5. Auto-conduite appropriée dans la réhabilitation musculaire.
6. Fonctionnement oro-facial normal et automatique.

La thérapie peut être considérée terminée lorsque le patient, de façon inconsciente, fonctionne selon le mode appris. La séquence, ci-haut décrite, peut se faire en une quinzaine de semaines. La rechûte se prévient par un retour occasionnel aux techniques de réhabilitation.

Cependant, on ne doit pas surcharger le patient par les techniques afin de ne pas créer de malaise à la gorge ou la langue.

De plus en plus, les dentistes comptent sur la myothérapie pour résoudre les problèmes de déglutition et le succès de cette thérapie explique l'exécution et l'acceptation de ce mode de traitement.^{5,17}

Plus spécifiquement la myothérapie aide dans 5 disciplines dentaires:¹

Orthodontie:

- Diminue la durée et le coût de traitement tout en assurant plus de confort.
- Élimine les rechûtes occasionnées par le déséquilibre musculaire.

Prosthodontie:

- Si la cause de détérioration de la dentition est une malocclusion, il est nécessaire de porter attention au

déséquilibre musculaire. La myothérapie contribue à un meilleur environnement pour la correction de l'occlusion, permettant plus de stabilité à la prothèse.

Périodontie:

- Diminue les forces traumatiques sur les tissus et les dents.
- Diminue le mouvement des dents après l'ajustement occlusal.

Chirurgie:

- Protège le meilleur environnement obtenu pour l'occlusion normale ainsi ac se.
- Préviend la rechûte.
- Conserve l'esthétique.

On voit donc que les patients doivent être dirigés vers le myothérapeute dans l'ensemble d'un traitement spécifique, mais on ne doit pas s'attendre à ce que le myothérapeute s'occupe des corrections occlusales.

La modification de l'environnement oral par orthodontie, glossotomie et moyens mécaniques a été proposée, mais il reste à préciser les avantages de ces méthodes. Auparavant, il faut ajouter que certains chercheurs sont plus ou moins opposés à l'utilisation de la myothérapie fonctionnelle. On conteste⁷ l'idée de l'équilibre de déglutition. Il est plus important de changer la position de repos lorsqu'une thérapie de la langue est indiquée pour le traitement d'une malocclusion.

La position de repos de la langue s'avère importante dans l'obtention de la rétention des prothèses de la mandibule.²³ A l'examen du patient porteur de prothèse complète, on doit observer la position de la langue à la position de repos. Un patient sur quatre présentera une position de la langue en rétraction, défavorablement à la stabilité de la prothèse. Ces patients ont besoin de rééducation pour réussir un traitement prosthodontique.

Tulley a démontré que les exercices seuls ne peuvent pas⁸ apporter des changements permanents. La myothérapie fonctionnelle n'apporte probablement pas de changement dans l'activité du bout de la langue et il semble plus opportun d'en altérer l'environnement. Les mêmes patients traités par myothérapie furent également traités en orthodontie — ce qui a effectivement changé le mode de déglutition. Il faut donc rechercher la myothérapie après l'orthodontie, lorsque l'occlusion est ajustée et que la déglutition anormale persiste. Un autre chercheur⁴ estime que la myothérapie est peut-être inutile et inconséquente dans le traitement orthodontique.

Dans cette dimension thérapeutique Proffit et Mason⁷ ont élaboré une planification de traitement qu'ils croient très justifiable:

A) Poussée simple de la langue:

Ne pas traiter à moins de problèmes associés. La thérapie myofonctionnelle ne fait pas alors partie des techniques de prévention.

B) Poussée de la langue avec problèmes phonétiques:

Les exercices repositionneront le bout de la langue en position de repos.

C) Poussée de la langue avec malocclusion sans problème phonétique:

Attendre l'âge de la puberté et retarder toute thérapie de la langue jusqu'à ce que la malocclusion soit traitée, pour les trois raisons suivantes: 80% des cas se corrigeront d'eux-mêmes, / la transition à la déglutition adulte est facilitée, / si la thérapie est nécessaire, elle sera facilitée grâce à l'adaptation au changement.

D) Poussée de la langue avec malocclusion et problèmes phonétiques:

La myothérapie aidera le repositionnement de la langue à l'état de repos et l'orthodontie doit précéder la myothérapie.

L'emploi des moyens mécaniques comme par exemple, les barres à tenons verticaux, donne un taux de rechûte important et leur usage est limité.⁵ La macroglossie étant rarement en cause, l'intervention chirurgicale peut néanmoins être bénéfique à l'occasion.

Pronostic

Bien que des chercheurs^{4,7,8} reconèdent guère de succès à la myothérapie fonctionnelle, comme moyen important dans la correction d'un comportement anormal de la langue, Barrett rapporte que le taux de permanence de la correction de la déglutition est de 75% et de 86% dans les corrections de l'occlusion.

Avec l'expérience de 3500 patients, Garliner⁹ rapporte des succès dans 90% des cas traités. Il ne croit pas²⁴ que les enfants perdent, avec le temps, l'habitude de la poussée de la langue car cette habitude se retrouve chez un très grand nombre d'adultes.

Le pronostic doit tenir compte de certains problèmes physiques:⁶ l'occlusion, le surplomb exagéré (horizontal, vertical), grande activité musculaire péri-orale, dents manquantes, respiration buccale, etc. . . . , tout en faisant la distinction entre les mauvaises habitudes musculaires (traitables par la myothérapie) et les comportements héréditaires qui, eux, peuvent résister aux tentatives de correction.²⁵

Conclusions

Les observations qui suivent ont pour but de stimuler une approche critique de l'information éventuelle le sur ce sujet.

1. La myothérapie fonctionnelle s'est développée comme une science clinique et plusieurs de ses données comme par exemple le besoin d'équilibre pendant la déglutition, le pronostic, ont été mises en doute par de récentes recherches scientifiques.

2. "Parce que ça fonctionne" n'est pas un critère suffisant pour permettre à l'intégration automatique des principes de la myothérapie dans le curriculum dentaire.

3. Une recherche plus approfondie de la part des propagandistes s'impose pour clarifier la compréhension du problème puisque des chercheurs ont démontrée que "LE" problème peut ne pas exister.

4. Les adultes qui "poussent" avec la langue peuvent

peut-être bénéficier de la myothérapie fonctionnelle comme adjuvent à l'orthodontie, la périodontie, la chirurgie et la prosthodontie.

5. Les cliniciens qui prônent les bienfaits de la myothérapie devraient collaborer aux recherches et ne pas se contenter d'accepter des modes de traitement proposés par des investigateurs ayant une compréhension limitée du système gnathologique.

- 1 Garliner, Daniel. Myofunctional Therapy in Dental Practice, Bartel Dental Book Co., Brooklyn, 177 p., 1971.
- 2 Zickefoose, William E. and Hanson, Marvin L. Oral Myotherapy, O.M.T. Materials, Sacramento, 1974.
- 3 Goldberger, Jeanne M. Tongue Thrust Correction, The Interstate Printers & Publishers, Inc., Danville, 1974.
- 4 Subtelny, Joanne D. and Subtelny, Daniel J. Oral habits: studies in form, function and therapy, Angle Ortho. 43:349-83, October, 1973.
- 5 Barrett, Richard. Oral Myofunctional Disorders. Mosby Co., St-Louis, 308 p., 1974.
- 6 Zickefoose, William E. Oral Myotherapy Handbook. O.M.T. Materials, Sacramento, 1974.
- 7 Proffit, William R. and Mason, Robert M. Myofunctional therapy for tongue-thrusting: background and recommendations. J.A.D.A. 90(2): 403-11, February, 1975.
- 8 Tulley, William J. A critical appraisal of tongue thrusting. Am. J. Ortho. 55:640-48, June, 1969.
- 9 Nacht, Edward S. An interview with Dan Garliner, Florida-American Society of Preventive Dentistry, Newsletter 2(3).
- 10 Ray, Harold G. and Santos, Harold G. Consideration of tongue thrusting as a factor in periodontal disease. J. Perio. 25:250-6, 1954.
- 11 Heath, John R. Some dental deformities caused by abnormal orofacial muscular behaviour patterns. The Dental Magazine and Oral Topics, Sept. 1956.
- 12 Jann, Gladys R. and Jann, Henry W. Orofacial muscle imbalance. J.A.D.A. 65(6): 767-79, December, 1962.
- 13 Zucker, Arnold H. A psychiatric appraisal of tongue symptoms. J.A.D.A. 85: 649-51, Sept. 1972.
- 14 Garliner, Daniel. The importance of communication between the myofunctional therapist and the dental and medical profession. J. District of Columbia Dental Society 42(3):114-7, October, 1967.
- 15 Sims, Fred W. The pressure exerted on the maxillary and mandibular central incisors by the perioral and lingual musculature in acceptable occlusion. Am. J. Ortho. 44:64-65, January, 1958.
- 16 Garliner, Daniel. Myofunctional therapy: an adjunct to oral surgery. J. District of Columbia Dental Society 40(3): 109-112, October, 1965.
- 17 Jann, Gladys R. and Witman, Dorothea F. Lispering and Tongue Thrusting. Penfield, New York, 1963.
- 18 Bernstein, Murray. Relationship of speech defects and malocclusion. Alpha Omega 50: 90-97, Sept. 1956.
- 19 Lundeen, Dale J. et al. Clinical study of dental caries and tongue thrust, J.A.D.A. 88: 1018-20, May, 1974.
- 20 Garliner, Daniel. Effects of unrecognized abnormal swallowing. Can. Dent. Ass. J. 34(6): 301-4, June, 1968.
- 21 Glaser, Clifford G. The sense of dental and labial articulation in orthodontic treatment. Am. J. Ortho. 37(8): 565-83, August, 1951.
- 22 Garliner, Daniel. Myofunctional therapy for the adult dental patient. Massachusetts Dent. Soc. J. 15(2): 74-80, Spring, 1966.
- 23 Wright, Corwin R. et al. Mandibular dental Stability. Overbeck Co., Ann Arbor, 1961.
- 24 Garliner, Daniel. The deviate swallow: a functional approach. Massachusetts Dent. Soc. J. 13(3): 26-30, Summer, 1964.
- 25 Tulley, William J. Adverse muscle forces: their diagnostic significance. Am. J. Ortho. 42(11): 801-14, 1956.

Report of a case:

THE VERRUCIFORM XANTHOMA

Michael J. A. Smith, BDS, FDS, RCPS

Peter Bunyan, BDS

Vancouver

The verruciform xanthoma is an uncommon benign lesion of the oral mucosa, first described in 1971. The authors review the clinical and histopathological features of this condition and present an additional case report. The importance of the clinician in recognizing this entity, which may simulate verrucous carcinoma, is emphasized.

The verruciform xanthoma is an uncommon benign lesion of the oral mucosa, first described by Shafer.¹ Fifteen cases were documented in which the prominent histological characteristic was the presence of large "foam" cells restricted to the connective tissue papillae between the epithelial rete pegs. None of the specimens were stained for lipids. Six further cases affecting the gingivae were reported by Miller and Elzay,² who commented on the importance of this lesion to the periodontist.

Lipid and electron microscopic studies were performed on specimens from two cases by Zegarelli et al² which confirmed the presence of lipid laden macrophages. In a later article⁴ these same investigators hypothesized that the verruciform xanthoma is initiated by epithelial degeneration and formation of lipids; these breakdown products then evoking an inflammatory response and the accumulation of "foam" cells between the epithelial ridges at the sites of lipid permeation through the epithelium.

Support for this hypothesis of inflammatory origin is given by Cobb et al,⁵ who reported findings similar to the results of the studies by Zegarelli et al.^{3,4} In addition, they commented on the apparent migration of "foam" cells into the germinal layer of the overlying epithelium.

Clinical features

The verruciform xanthoma is usually described as a small, raised lesion with a papillary or granular surface affecting principally the gingivae or alveolar mucosa (Table 1). The largest lesion reported was 1.5 × 2.0 cm.³ While the colour of the lesion is commonly described as red or pink, not infrequently it is white and hyperkeratotic. The base of the lesion is usually sessile but occasionally is pedunculated.

Of the 26 reported cases in the literature (including this report), all patients were Caucasians, 13 were male and 13 female, and the mean age was 45 years (one age was not given) with a range from 18-80 years. Patients with this condition are invariably symptomless; the duration of the lesion being two years in some cases.

Histopathology

The lesion presents certain characteristic microscopic features; the stratified squamous epithelium assumes an irregular verruciform or papillary configuration at the surface and is covered by parakeratin. Surface crypts, formed between the papillary projections, are filled with parakeratin and may extend downwards into the epithelium. Micro-organisms are also commonly present within this parakeratin layer.

The epithelial rete pegs are elongated and extend into the underlying connective tissue to a uniform depth. The connective tissue papillae between the rete pegs are filled by large "foam" cells or Xanthoma cells; this being the outstanding feature of the lesion, along with the observation that these "foam" cells do not appear to violate a line drawn across the base of the rete pegs.

A sub-epithelial chronic inflammatory cell infiltrate may also be seen. Staining of the "foam" cell cytoplasm with P.A.S.¹ has revealed the presence of P.A.S. positive granules, and with Scharlach R, an abundance of orange-red lipid.³

Verruciform xanthoma: reported sites affected.* Table 1

Gingivae	12
Alveolar mucosa	8
Palatal mucosa	2
Floor of mouth	2
Lip	1
Muco-buccal fold	1
Total cases	26

*Compiled from published reports of Shafer,¹ Miller and Elzay,² Zegarelli et al.,^{3,4} Cobb et al.,⁵ and this report.

Case report

A 47 year old Caucasian female was referred by her general dental practitioner for consultation in respect to a gingival lesion adjacent to the right mandibular second premolar. The lesion had been noticed approximately six months previously due to its rough texture, and slight soreness was reported when the area was traumatized. The gingival lesion was well-circumscribed and raised with a sessile base, firm in consistency and extended around the cervical margin of the vital mandibular right second premolar, from its mesio-buccal angle to the disto-lingual angle (the adjacent molar being absent).

The surface was distinctly pebbly and mildly hyperkeratotic, and underlying slight yellow colour was detectable and the surrounding gingival tissue was chronically inflamed. Radiographic examination of the area was unremarkable. The remaining examination and medical history were non-contributory.

Excision biopsy was performed under local anaesthesia and the specimen measuring 1×0.7 cm was submitted for histopathological examination. Healing was uneventful and there was no evidence of recurrent disease nine months later.

Microscopic examination

Microscopic examination of Haematoxylin and Eosin stained sections made possible the diagnosis of Verruciform Xanthoma; revealing features identical to those described by Shafer¹ in his original article and subsequently by Zegarelli et al.³

The squamous cell epithelial surface was papillary and covered by parakeratin (Fig. 1), which also filled surface crypts formed between the papillary projections. The epithelial rete pegs were elongated and uniformly extended into the underlying connective tissue (Fig 2). "Foam" cells were clearly evident and confined to the connective tissue papillae between the rete pegs (Figs 3 and 4).

A sub-epithelial chronic inflammatory cell infiltrate was present. No lipid stains were possible in this case.

Discussion

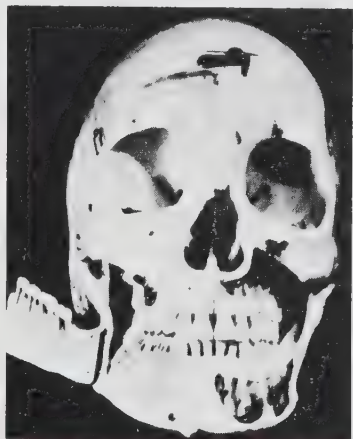
There appears to be no association of verruciform xanthoma with any systemic disease and it is considered to be initiated locally from within the epithelium.⁴ No relevant medical history has been disclosed for any of the cases reported in the literature with the exception of one patient who was a known diabetic.² Blood investigations for lipid and glucose levels, where performed, have all been normal. Treatment is by excisional biopsy and no recurrences have been noted.

Reported clinical impressions of the nature of the lesions prior to their removal have included papilloma, papillomatosis, fibroma, verruca vulgaris. In view of the often warty nature of this lesion, we suggest the addition of verrucous carcinoma to this list of differential diagnoses.

The authors wish to express their appreciation to Dr. W. S. Wood for his histopathology advice; to Mr. R. Patton for his photographic assistance; and to Mrs. Holst for her help in preparing the manuscript.

Dr. Smith and Dr. Bunyan are assistant professors in the Department of Oral Medicine, Faculty of Dentistry, University of British Columbia, Vancouver.

- 1 Shafer, W. G. Verruciform xanthoma. *Oral Surg* 31:784, 1971.
- 2 Miller, A. S. and Elzay, R. P. Verruciform xanthoma of the gingiva. *J. Periodont* 44:103, 1973.
- 3 Zegarelli, D. J., Zegarelli-Schmidt, E. C. and Zegarelli, E. V. Verruciform xanthoma: a clinical, light microscopic and electron microscopic study of two cases. *Oral Surg* 38:725, 1974.
- 4 Idem. Verruciform xanthoma: further light and electron microscopic studies, with the addition of a third case. *Oral Surg* 40:246, 1975.
- 5 Cobb, C. M., Holt, R. and Denys, F. R. Ultrastructural features of the verruciform xanthoma. *J Oral Path* 5:42, 1976.



10-piece Demonstration skull (Natural bone)

All teeth are natural and original. The calvarium is sectioned horizontally. The basal portion has been sagittally sectioned. One temporal is movable. A portion of the mastoid and squama has been removed, baring internal ear in full view. Tremendous care has been taken in the maxillae and mandible to expose the mysteries of the dentitions, the roots, the bony margin of the alveolar process, dental vessels and nerves reinstated artificially. A wonderful and vivid picture of the interior of the teeth is given by a sagittal section through the teeth from top to the roots on one side of the mandible. Dental anatomy is uniquely presented in this skull.

8 days inspection period. 10% of catalogue price all cost incl. \$228.00. Carrying case \$27.00 ea.

Crane Humain Naturel, 10 parties

Pour démonstration et étude de la denture et de l'ostéologie cranio-faciale. Le crane naturel le plus complet avec la denture, la plus pure disponible à l'heure actuelle.

La mandibule est amovible et peut se retirer. La maxillaire supérieure et la mandibule sont ouverts d'un côté, permettant de voir les racines des dents avec leurs vaisseaux et leurs nerfs. Un côté du maxillaire supérieur présente une petite fenêtre; de l'autre une coupe sagittale des dents passe par les racines, donnant une réelle et merveilleuse vue de celles-ci. Toutes dents sont naturelles.

Osta Intern., 922 Keil Str., White Rock, B.C.

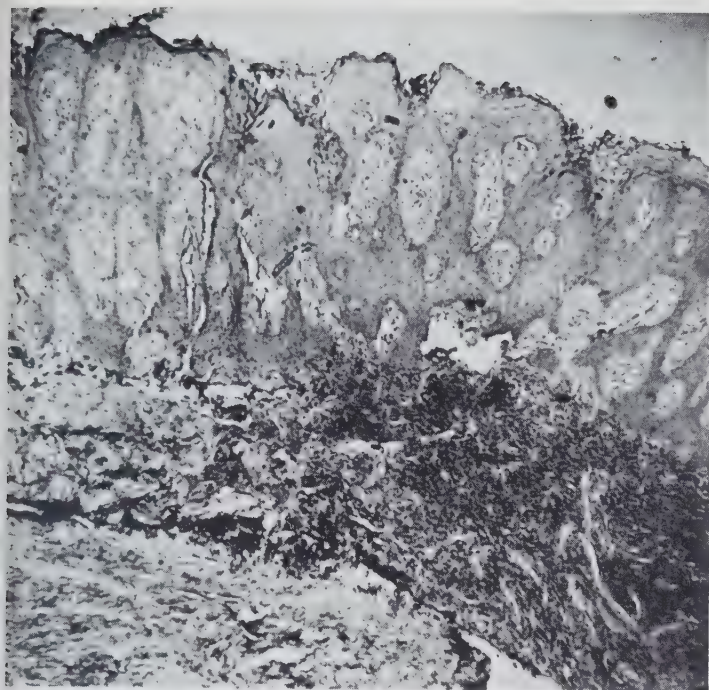


Fig 1 Photomicrograph showing papillary surface and crypts filled with parakeratin and debris. H & E stain. Original magnification $\times 50$.



Fig 2 Photomicrograph showing downgrowth of rete pegs. H & E stain. Original magnification $\times 100$.

Fig 3 Photomicrograph demonstrating elongated rete pegs and foam cells (arrowheads) confined to the connective tissue papillae. Also sub-epithelial chronic inflammatory cell infiltrate. H & E stain. Original magnification $\times 200$.



Fig 4 High power photomicrograph showing large foam cells (arrowheads) adjacent to the epithelium at the tip of a connective tissue papilla. H & E stain. Original magnification $\times 480$.



A COMPARISON OF CLINICAL AND PHOTOGRAPHIC ASSESSMENT OF PLAQUE AND GINGIVITIS

R. H. Johnson, DDS, MSD
J. Rozanis, PhD
I. D. F. Schofield, DDS, FRCD(C)
M. S. Haq, PhD
London, Ont.

In the following article, each of 63 volunteers had plaque and gingival indices recorded in vivo six times over a 12-week period in an investigation that took several months to complete. A facial view of the maxillary and mandibular incisor teeth and a lingual view of the mandibular incisors were photographed at each patient visit. When all transparencies had been developed, the same indices were recorded over a two-day period by projecting the slides onto a screen in a sequential manner for each patient. The data from 56 subjects (seven individuals were excluded because of photographic problems) were subjected to a statistical analysis using the chi-square in an attempt to determine if there was a difference in the indices recorded by the two methods of evaluation. With respect to the gingival index, no statistically significant difference was found at any of the time periods tested. Five of 12 mean plaque indices were statistically different at the 5 per cent significance level, and in each case the index was higher when graded photographically than when assessed by clinical means. Despite its limitations, the authors favour the photographic means of assessment if standardized techniques are employed.

An investigation undertaken to evaluate changes in gingival health or in the amount of deposits and stains on teeth certainly is fraught with difficulties. The accurate detection and recording of slight differences in appearance as the days and weeks pass by create a problem in both intra- and inter-examiner reliability. To this end the relative merits of clinical versus photographic evaluation have been debated in the literature.¹⁻⁷

According to James,¹ the method of taking a standardized photograph and assessing the projected transparency at a later date is superior to that of making a clinical diagnosis of the subject at the time of the original examination. His reasons are:

1. Photographs can be maintained for reappraisal.
2. Photographs can serve as a permanent reminder of the standards adopted at the time of assessment.
3. A complete series can be evaluated within a short period.

4. Photographs can be randomized for "blind" assessment, thus eliminating bias.

Massler et al² contend that in their study the evaluation of the gingivae was made much more carefully and accurately from colour photographs than by oral examination *in vivo* because serial photographs can be used for simultaneous direct comparison by more than one examiner, while visual memory is unreliable and written records are subject to bias. Jackson³ has used photographs as a training aid in an attempt to establish uniformity among examiners.

Van Huysen and Boyd,⁴ when studying the relative cleaning efficiency of several dentifrices, opted for the use of colour photographs because a "side by side" appraisal under constant lighting conditions could be made. Because colours in transparencies sometimes vary, the authors recommended that an investigator train himself to assess quantitative differences of the accumulations on teeth rather than the colour of the debris.

Hazen⁵ recognized that anyone involved in clinical studies would prefer to review standardized photographs rather than conduct the tedious day-long clinical examination if similar information could be obtained. But can it? In Jackson's study,³ the author tried to assess changes in the gingival margin and papillae from cuspid to cuspid with one 35 mm colour transparency and found that because of the curvature of the arch he was unable to accomplish this accurately; according to the author three transparencies for the same region would have been preferred.

Hiniker and Forscher⁶ studied the effect of toothbrush type on gingival health using both clinical and photographic assessment. They found that accurate evaluation from slides was difficult because of inconsistent colour reproduction and the elimination of palpation as a diagnostic tool. Because the data obtained by the inspection of colour photographs differed from the clinical scores, a choice between the two methods was necessary and the authors chose the latter.

Suomi et al⁷ tried to evaluate gingival inflammation and concluded that, at least in their study, visible changes in gingival colour could not be determined from slides.

In an attempt to help answer the question, "Are good

colour photographs a reliable means of recording clinical scores?" the following investigation was conducted.

Materials and methods

As part of an experiment testing the efficacy of the anti-biotic spiramycin as a plaque control agent,^{8,9} intra-oral photographs were taken, using the same lot of 35 mm Kodachrome II film in a Minolta SR-T101 camera with an Auto Bellows Rokkor and 100 mm F4 short mount lens equipped with a Braun F 290 flash attachment. The camera was hand-held with a constant focus distance, and background light was provided by the high beam of Pelton-Crane dental lamp, Model LF+*. The camera settings were *f*/22 and 1/60 second. Two photographs were taken at each patient visit — the first was a facial view of the anterior teeth after having asked the patient to slide his (her) mandible forward to an "end-to-end" position so that the maxillary and mandibular gingiva occupied the same plane. The second photograph was an indirect view of the lingual surface of the mandibular incisor teeth (this site was selected because of the tendency for calculus formation) using an intra-oral rhodium plated photographic mirror** dipped in hot water to prevent fogging.

Unstained plaque and gingivitis scores were recorded *in vivo* and photographically on the straight facial and mesial of the maxillary left and mandibular right central incisors and on the lingual of the mandibular right central incisor according to the following criteria.

Plaque index

- 1 = No plaque visible.
- 2 = Moderate accumulation of soft deposits on the gingival margin and/or adjacent tooth surfaces.
- 3 = Abundance of soft matter on the gingival margin and adjacent tooth surface.

Gingivitis index

- 0 = Normal gingivae.
- 1 = Mild inflammation with slight change in colour and slight edema.
- 2 = Moderate inflammation with cyanosis, edema, and glazing.
- 3 = Severe inflammation with marked cyanosis, edema, and ulceration.

The 63 volunteers presented at the dental clinic of the University of Western Ontario, Faculty of Dentistry, six times over a 12-week period. At the first visit (called "week -1") after the photographs were taken and the plaque and gingivitis indices recorded, plaque samples were harvested from the contra-lateral teeth for laboratory investigation. The volunteer's teeth then were scaled fairly thoroughly and the participant was encouraged to clean his (her) teeth as well as possible for the next week in an attempt to establish

a common base line of gingival health for all patients.

At the second visit, seven days later ("week 0"), photographs were taken, indices recorded, and plaque samples collected from the contra-lateral teeth. The subject then was asked to refrain from cleaning his (her) teeth with any mechanical device for the next 11 weeks and, on a random double blind basis, each person was given 20 capsules of either the drug (spiramycin) or the placebo, to be taken four times a day for the next five days. Each volunteer returned at weeks 1, 3, 7 and 11 and, as before, two photographs were taken, plaque and gingivitis indices were assessed *in vivo*, and plaque samples collected for laboratory studies. At no time were either the volunteers or the clinical investigators aware of the type of capsule taken during the five-day period, nor did the examiners have access to the plaque and gingivitis scores recorded during any of the same patient's previous visits. When the 11 weeks were completed the participants recommenced personal oral hygiene and received all necessary dental treatment. The clinical assessment thus took 12 weeks to complete for any one patient, and approximately one year for all 63 volunteers.

When the photographs returned from processing, the amount of gingival inflammation and plaque deposit were graded using the same scoring system employed *in vivo*. The colour transparencies were projected onto a screen and the indices for all patients were recorded over a two-day period. Seven patients were eliminated from the comparison because at least one of the 24 photographs taken on each of them was not considered satisfactory for assessment purposes.

Because the rate of plaque formation varies in different parts of the same mouth,^{10,11} indices in the maxillary arch were considered separately from those in the mandible. In the case of plaque, average scores for the maxillary and mandibular teeth were calculated for each participant and then the number of participants with average scores "under 1.5", "1.5 to 2.5", and "over 2.5" were grouped for each of the six time periods (Tables 1 and 2). Once the average gingivitis scores for the maxilla and mandible were determined, each was placed into one of the following categories — "under 0.5", "0.5 to 1.5", "1.5 to 2.5", or "over 2.5" (Tables 3 and 4). To ascertain if there was any difference between the scores obtained by clinical and photographic means at each time period, the chi-square statistic was calculated based on the formula of Rao.¹² The programs were written in FORTRAN and all computations were performed on a Contral Data CYBER 73 computer at the University of Western Ontario.

Results

The weekly variation of chi-square comparing the clinical and photographic assessment of plaque and gingivitis can be seen in Tables 1 to 4. The data demonstrate that in the case of the gingival index (Tables 3 and 4) there was no statistically significant difference in chi-square values at any of the time periods studied. In other words, the degree of gingival inflammation when averaged for all patients at any given

*The Pelton and Crane Co., Charlotte, N.C. 28203, U.S.A.

**Evaporated Metal Films Corp., 701 Spencer Road, Ithaca, New York 14850, U.S.A.

week was rated the same regardless of the method of evaluation — clinical or photographic. With respect to plaque, 7 of 12 chi-square values were not significantly different at the 5 per cent level (Tables 1 and 2). It is interesting that in each of the five periods where a difference was calculated, more participants were given a higher plaque index during the photographic assessment than during the clinical evaluation. It also should be noted that four of the five differences occurred in the maxilla where only a facial aspect of the teeth and gingiva were photographed. In the mandible where both facial and lingual photographs were taken and mean values calculated, five of six categories displayed no statistically significant difference between the clinical and photographic scores.

Discussion

The results are at odds with those of Hiniker and Forscher⁶ and Suomi et al⁷ and indicate that under the conditions of the present investigation, the amount of gingival inflammation can be evaluated with equal precision by both clinical and photographic means. The indices selected for use in the current investigation may not be ideal, but

because scoring was based on the same criteria in the two methods of evaluation, the results in this comparative study should be considered valid — within certain limits. With respect to plaque, an *unstained-plaque score* was used.

Loesche et al¹³ demonstrated that a *stained-plaque score* failed to reflect plaque mass except in those instances where the plaque was very thin. Clinical assessment of plaque is based on a single characteristic — the surface area — whereas laboratory tests (such as wet weight, turbidity readings, nitrogen and carbohydrate content, and bacterial counts) take into account the multidimensional characteristics of plaque. According to Loesche and Green,¹⁴ an unstained-plaque score, in which the plaque is thick enough to be seen but not massive in amount, does correlate with the above laboratory parameters.

Relative to gingivitis, in the population studied all degrees of gingival health and disease were present. This made standardized scoring of the gingival index much more troublesome than if all volunteers had begun the experiment in a healthy situation, and inflammatory changes took place as the weeks progressed. Early inflammation could be observed quite readily if the gingiva was healthy initially but when gingivitis already was present, subtle changes were

A comparison of maxillary plaque indices

Table 1

Week	-1		0		1		3		7		11	
	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.
Under 1.5	46	35	49	41	28	9	16	3	18	3	18	2
1.5-2.5	10	21	7	14	27	46	38	49	36	47	35	48
Over 2.5	0	0	0	1	1	1	2	4	2	6	3	6
Chi-square values	5.397		4.044		15.702		10.953		14.172		15.836	
5% chi-square (2.df) = 5.99												

A comparison of mandibular plaque indices

Table 2

Week	-1		0		1		3		7		11	
	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.
Under 1.5	32	22	38	29	10	8	10	5	6	4	9	0
1.5-2.5	22	32	18	27	43	46	42	50	42	43	39	42
Over 2.5	2	2	0	0	3	2	4	1	8	9	8	14
Chi-square values	3.704		3.606		.523		4.153		470		10.747	
5% chi-square (2.df) = 5.99												

almost impossible to detect. As stated previously, an attempt was made, by a prophylaxis followed by a week in which the participants were encouraged to clean their teeth as well as possible, to get everyone to the same base level of gingival health, but this really was not accomplished. Furthermore, people with mildly, moderately, or severely inflamed gingiva were interspersed with each other and with subjects with healthy gingiva, thus eliminating any chance for the examiners to "get into a groove" when it came to recording a gingival index. Coupled with this was the fact that it took 12 weeks to complete the clinical investigation on any one participant and approximately a year for all the volunteers. Even though the two examiners (RHJ and IDFS) re-confirmed their scoring technique two or three times during the course of the experiment, intra- and inter-examiner reliability probably became somewhat suspect, and a clinical evaluation method by the use of photographs over a one or two day period became more attractive. This feeling is supported by other authors.¹⁻⁴

Photographic evaluation is not free from problems (the November 1968 issue of "Dental Clinics of North America" contains several helpful articles on this subject). Some areas of the mouth (e.g., the buccal and lingual surfaces of

molars) are difficult to capture on film in a reproducible manner. Intra-oral mirrors can be used, but great care must be taken to ensure that the field is well illuminated with background light. In the current investigation only anterior teeth were photographed, but this does not mean that the indices recorded in this region are representative of all parts of the oral cavity. For truly standardized photographs, an apparatus should be constructed to ensure that the subject-camera relationship is constant with respect to distance, angulation and magnification. This may be feasible for anterior facial views but is almost impossible for indirect mirror views in the posterior regions. In the current study, all photographs were taken by the same investigator (RHJ). The patient was asked to slide his (her) mandible forward so that the maxillary and mandibular incisors occupied an end-to-end position, thus eliminating different focal planes. Although the camera was hand-held, an attempt was made to standardize magnification by setting the automatic bellows at a constant reading and then moving the camera back and forth until the teeth were in focus. Colour tones in transparencies can vary if rolls of film with different lot numbers are used and/or processing is done at different time periods.

A comparison of maxillary gingival indices

Table 3

Week	-1		0		1		3		7		11	
	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.
Under 0.5	10	13	3	11	1	3	0	0	0	0	0	0
0.5-1.5	39	38	49	41	51	49	45	51	43	48	44	46
1.5-2.5	7	5	4	4	4	4	11	4	13	7	10	8
Over 2.5	0	0	0	0	0	0	0	1	0	1	2	2
Chi-square values	.737		5.282		1.040		4.642		3.075		.266	

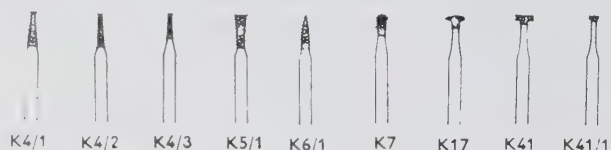
5% chi-square (3.df) = 7.81

A comparison of mandibular gingival indices

Table 4

Week	-1		0		1		3		7		11	
	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.	Clin.	Photo.
Under 0.5	4	2	5	4	3	0	0	0	0	0	0	0
0.5-1.5	37	44	43	45	44	49	41	46	34	42	36	39
1.5-2.5	15	9	8	7	9	7	15	8	20	11	17	15
Over 2.5	0	1	0	0	0	0	0	2	2	3	3	2
Chi-square values	3.772		.633		3.519		4.417		3.655		.445	

5% chi-square (3.df) = 7.81



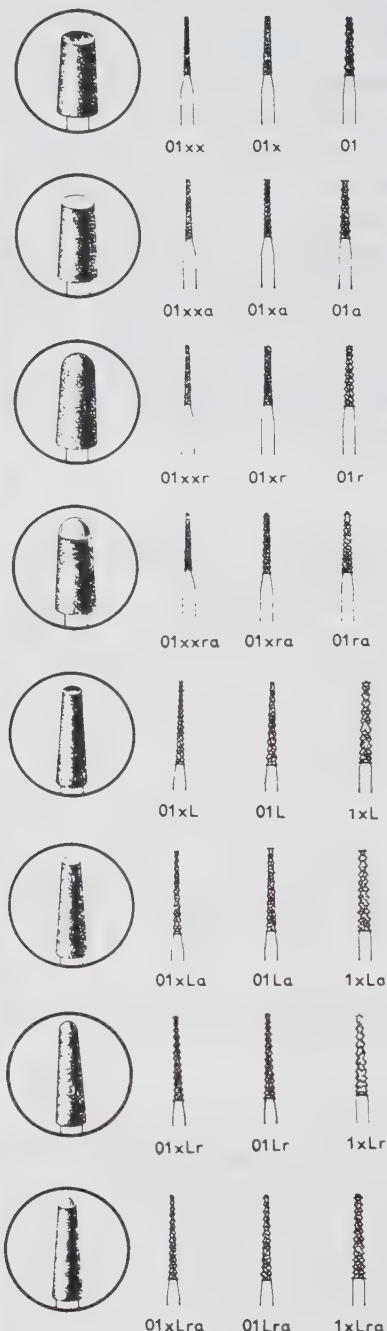
FOR-CCO



**DIAMOND
INSTRUMENTS**

THESE, AND MANY MORE

Write for Catalog No. 143



The higher numbers recorded for plaque in five of 12 time periods via the photographic technique can be explained by the fact that the slides for any one patient were projected sequentially at approximately 15 to 20 second intervals. It therefore was easy for the examiner to remember the index numbers assigned to the last week's slides, and so the new ratings had to be equal to or higher than the previous ones. In the *in vivo* assessment, up to four weeks had elapsed between patient visits and, of course, the clinical portion of the investigation took many months to complete. Intra-examiner consistency may not have been as good in this situation. Despite this, the average *mandibular* plaque indices where facial and lingual photographs were used were surprisingly uniform in the two evaluation methods. One can only speculate what might have happened if palatal views of the maxillary teeth had been photographed.

This study was supported by The Richard and Jean Ivey Fund, London, Ontario. The authors would like to thank Dr. R. E. Jordan for his help in this project.

Dr. Johnson is professor, Department of Oral Medicine, University of Western Ontario, London, Ontario.

Dr. Rozanis is associate professor, Department of Bacteriology and Immunology, University of Western Ontario.

Dr. Schofield is associate professor, Department of Oral Surgery, University of Western Ontario.

Dr. Haq is associate professor, Department of Mathematics, University of Western Ontario.

- 1 James, P. M. C. Epidemiological studies in relation to gingivitis. *Dent Pract* 13:344, 1963.
- 2 Massler, M., Rosenberg, H. M., Carter, W. et al. Gingivitis in young adult males: lack of effectiveness of a permissive program of toothbrushing. *J Periodont* 28:111, 1957.
- 3 Jackson, D. The efficacy of 2 per cent sodium ricinoleate in toothpaste to reduce gingival inflammation. *Brit Dent J* 112:487, 1962.
- 4 Van Huysen, G. and Boyd, T. M. Cleaning effectiveness of dentifrices. *J Dent Res* 31:575, 1952.
- 5 Hazen, S. P. Indices for the measurement of gingival inflammation in clinical studies of oral hygiene and periodontal disease. *J Periodont Res* 9: Suppl 14:61, 1974.
- 6 Hiniker, J. J. and Forscher, B. K. The effect of toothbrush type on gingival health. *J Periodont* 24:40, 1954.
- 7 Suomi, J. D., McClendon, B. J. and Frandsen, A. M. The evaluation of gingival inflammation from color slides. *J Dent Res* 51:663, 1972.
- 8 Rozanis, J., Johnson, R. H., Haq, M. S. et al. Spiramycin as a selective dental plaque control agent: laboratory data. Submitted for publication.
- 9 Johnson, R. H., Rozanis, J., Schofield, I. D. F. et al. Spiramycin as a plaque control agent: clinical trial. Submitted for publication.
- 10 Socransky, S. S. and Manganiello, S. D. The oral microbiota of man from birth to senility. *J Periodont* 42:485, 1971.
- 11 Kelstrup, J. and Theilade, E. Microbes and periodontal disease. *J Clin Periodont* 1:15, 1974.
- 12 Rao, C. R. Advanced statistical methods in biometric research. New York. John Wiley & Sons, 1952.
- 13 Loesche, W. J., Green, E., Kenney, E. B. et al. Effect of topical kanamycin sulfate on plaque accumulation. *J Amer Dent Ass* 83:1063, 1971.
- 14 Loesche, W. and Green, E. Comparison of various plaque parameters in individuals with poor oral hygiene. *J Periodont Res* 7:173, 1972.

PFINGST & COMPANY, INC.
62 COOPER SQ. NEW YORK, N.Y. 10003

The Extraoral Film Story

in Panoramic Black and White.

Extraoral radiography used in conjunction with intraoral radiography tells the whole story.

After you've made periapical, or interproximal, or occlusal X-ray studies of your patient, you may find that in addition, you need a broader scope of information for your diagnosis.

You get it with extraoral radiography—in examinations of the mandible and the maxilla that call for a panoramic view of the oral structures on a single radiograph.

Kodak films for both extraoral and intraoral radiography give you high quality informative radiographs. And with proper processing, you'll need only a minimum of exposure.

For more information about our panoramic dental X-ray film, write:

Radiography Markets, Kodak Canada Ltd.,
3500 Eglinton Avenue West, Toronto, Ontario
M6M 1V3; or call a Kodak representative to
arrange an appointment.



a commitment
to quality



Why you should book advertising space
NOW
in the Journal of the Canadian Dental Association
... if you haven't already

Comprehensive coverage is the program for 1978. Top experts in the dental field will be writing on a wide range of subjects. The Journal of the Canadian Dental Association leaves to others the reprinting and abstracts of scientific work from elsewhere and concentrates on its own mandate of providing a professional outlet for the original clinical and scientific work of Canadians.

The Journal, as the official professional magazine of Canadian dentists leads the way with first hand knowledge and new developments in all areas of dentistry. The dentists in Canada value their Journal highly and keep the issues as a source of reference.

There is still time for you to book your space in the Journal and reach the market you want. We look forward to being of service to you in 1978.

ANNUAL INDEX

Volume 43, 1977

A

ALLOYS

CDA Council for Dental Materials and Devices: Status Report: High copper amalgams — 437

AMALGAM

PHYSICAL PROPERTIES

CDA Council for Dental Materials and Devices: Status Report: High copper amalgams — 437

ANKYLOSIS

TEETH

Ruprecht, A. and Wright, G. Z. — Ankylosis with and without oligodontia: Report of seven cases — 444

ANTISEPTICS, GERMICIDES

Beagrie, G. S. and Brännström, M. — Pulpal response to cavity treatment with microbicidal solution and silicate restorations in monkeys — 239

ANTRUM

Friedlander, A. A. — Removal of an antral dentigerous cyst via a modified Caldwell-Luc: Report of a case — 179

*ARTICULATION AND OCCLUSION

Harper, R. and Smylski, P. T. — Occlusal adjustment in orthognathic surgery: the team approach — 124

ASEPSIS, DENTAL

Beagrie, G. S. and Brännström, M. — Pulpal response to cavity treatment with microbicidal solution and silicate restorations in monkeys — 239

ASSOCIATION DENTAIRE CANADIENNE

Cripton, M. J. — Pour la nouvelle année: un message du président — 50

B

BAKER, C., TROTT, J. R. and WALTON, P. — See Trott

BAKER, G., RALEY, L. and CHAPNICK, P. — See Raley

BAROLET, R. Y. and DESAUTELS, P. C. — See Desautels

BEAGRIE, G. S. — Why research? — 320

BEAGRIE, G. S. and BRANNSTROM, M. — Pulpal response to cavity treatment with microbicidal solution and silicate restorations in monkeys — 239

BELLEMARE, MICHEL — La fluoruration de l'eau — 520

BIOPSY

Trott, J. R. and Morrow, D. — Biopsies: clinical and laboratory considerations — 492

BRANNSTROM, M. and BEAGRIE, G. S. — See Beagrie

BROOKE, R. I. — Secondary osteoarthritis (osteoarthritis) of the temporomandibular joint — 323

BROOKE, R. I. and SEGANSKI, D. P. — Aetiology and investigation of the sore mouth — 504

BUNYAN, P. and SMITH, M. J. A. — See Smith

C

CANADIAN DENTAL ASSOCIATION

Cripton, M. J. — New Year's Message from the President — 8

McIntosh, W. G. — A dental convention with a difference — Opportunity or responsibility? (Editorial) — 392

Report on Dental Students' Conference — 115

Teteruck, L. — The Canadian Dental Aptitude Test — 225

COUNCIL FOR DENTAL

MATERIALS AND DEVICES

Status Report: High copper amalgams — 437

Status Report: Periodontal dressings — 501

CANADIAN FUND FOR DENTAL EDUCATION

Canadian Fund for Dental Education Annual Report — 155

Dunn, Wesley J. — "Since what we choose is what we are . . ." — 473

Dunn, Wesley J. — "L'objet de notre choix: ce que nous sommes . . ." — 474

McIntosh, W. G. — Do you need a reminder? October is once again CFDE month! (Editorial) — 468
McIntosh, W. G. — Encore une fois, octobre, le mois du FCED (Editoriale) — 471

CARIES, DENTAL

Richardson, A. S. — Caries under an occlusal sealant — 188

FLUORIDE FOR PREVENTION IN WATER SUPPLIES

Bellemare, Michel — La fluoruration de l'eau — 520

CASTINGS

Metrick, L. — A direct technique for post-core castings — 329

CAVITIES

PREPARATION

Beagrie, G. S. and Brännström, M. — Pulpal response to cavity treatment with microbicidal solution and silicate restorations in monkeys — 239

STERILIZATION

Beagrie, G. S. and Brännström, M. — Pulpal response to cavity treatment with microbicidal solution and silicate restorations in monkeys — 239

CDA COUNCIL FOR DENTAL MATERIALS AND DEVICES: STATUS REPORTS

High copper amalgams — 437

Periodontal dressings — 501

Root canal sealing materials — 538

CEMENTS

SILICATE

Beagrie, G. S. and Brännström, M. — Pulpal response to cavity treatment with microbicidal solution and silicate restorations in monkeys — 239

CHANEY, S. A. — Immediate denture impression technique using zinc-oxide and eugenol and rubber base impression material — 130

- CHAPNICK, P., BAKER, G. and RALEY, L. — See Raley
- CHARTER, D. — Canadian dentist honored by American Photographic Society — 20
- CHILDREN
- DENTISTRY FOR
- Lewis, D. W., Magid, S. C. and Jarrett, M. E. — The Waterloo preschool children's denticare study — 27
- PRESCHOOL
- Lewis, D. W., Magid, S. C. and Jarrett, M. E. — The Waterloo preschool children's denticare study — 27
- BUNYAN, P. and SMITH, M. J. A. — See Smith
- CLEANING TEETH
- Galil, K. A. — An *in vitro* assessment of oral prophylaxis procedures. A scanning electron microscopy study — 370
- COMPTON, F. H. — CDA Council for Dental Materials and Devices. Status Report: Periodontal dressings — 501
- CONDYLE
- Brooke, R. I. — Secondary osteoarthritis (osteoarthritis) of the temporomandibular joint — 323
- Morency, R. — Pathologie de l'articulation temporo mandibulaire — 326
- CORRESPONDENCE
- Archibald, R. J. — Dentist mortality rates — 306
- Bachinsky, Donald J. — Toothkeeper evaluation — 306
- Borrow, E. W. — Fluoride in milk? — 550
- Bowen, L. H. — Fluoride in milk? — 550
- Bullen, D. C. T. — Emphasis on prevention — 560
- Burgess, Susan — Concerned about Journal — 145
- Ferguson, Norman C. — Caries under an occlusal sealant — 306
- Jahjah, Michael — Olympic dental clinic — 10
- Keen, M. M. — The impacted molar — 516
- Knapp, J. — New purpose for old dental chairs — 560
- Kogon, David — The good old days — 147
- Kudron, Tony — Why research? — 388
- Kuliak, P. K. — Reaction to Xylocaine — 111
- Levine, Mitchell — Klondike dancing girls — 10
- Lewis, D. W. — Toothkeeper evaluation? — 48
- Lewis, M. H. — Winnipeg Free Press editorial — 208
- Main, J. H. P. — Postgraduate training and graduate education in dentistry — 46
- Nasser, J. — Winnipeg Free Press editorial — 146
- Richardson, A. S. — A word of praise — 111
- Richardson, A. S. — Caries under an occlusal sealant — 306
- Ruprecht, A. — Postgraduate training and graduate education in dentistry — 46
- Sodek, Jaro — Postgraduate training and graduate education in dentistry — 208
- Sperber, G. H. — Klondike dancing girls — 10
- Taylor, Diana J. — Head and mouth protection — 209
- Truvert, M. — Western Canada Dental Convention — 388
- Walkey, G. Cecil — Indocid — 209
- Wyman, Roel J. — Pulpal response to cavity treatment — 388
- Wyman, R. — Objection to cartoons — 560
- CRIPTON, MICHAEL J. — New Year's message from the President (Editorial) — 8
- CRIPTON, MICHAEL J. — Pour la nouvelle année: un message du président — 50
- CYSTS
- Friedlander, A. A. — Removal of an antral dentigerous cyst via a modified Caldwell-Luc: Report of a case — 179
- D**
- DEATHS
- Ablack, John Lennox — 530
- Adamec, Albert — 266
- Allen, Ernest Fraser — 108
- Armstrong, Willard Ferrier — 404
- Aunger, William Reid — 356
- Blandin, Murray Howard — 16
- Bourque, Jean Eudes — 108
- Bowen, John Owens — 108
- Bratten, Chester Roland — 16
- Brault, Jean-Charles — 173
- Britton, Garnet Lyons — 214
- Carmichael, Norman Cavin — 314
- Carty, John Henry — 214
- Caulfield, John Howard — 57
- Champagne, J. H. Donat — 356
- Charland, Walter E. — 314
- Cordone, Joseph A. — 108
- Cowan, Margaret Irene — 173
- Dawson, Delmar Goodwin — 404
- Erhardt, Ronald Walter — 173
- Florence, Donald Eugene — 16
- Fulford, Cecil Harold — 356
- Graham, C.C. — 214
- Honey, Morley — 266
- Huculak, Nick — 530
- Husband, Clarence D. — 356
- Ingimundson, August B. — 404
- Ishiwara, George Akira — 314
- Janzen, William Eldon — 484
- Kennedy, George T. — 57
- Kennedy, John Dennis Lillis — 214
- LeBlond, Oscar — 484
- Lipman, Daniel — 108
- Loucks, Fred Stanley — 108
- MacLaurin, John Chisholm — 173
- Marchand, Jacques — 108
- McCutcheon, James — 57
- McKenty, Mark Vincent — 530
- Menzies, Archibald Parker — 108
- Mongeau, Ernest Alphonse — 530
- Murphy, George Newman — 173
- Provencher, Henri — 266
- Qualley, Eric — 530
- Ramsay, Allen Robert — 108
- Rice, Robert, N. D. — 404
- Ryan, John Thomas — 266
- Sivers, William Mee — 214
- Sproul, Frank E. — 266
- Star, Isidore — 484
- Thompson, James Elmer — 57
- Thurston, Gordon Bertram — 404
- Turack, Edward John — 404
- Verth, John — 16
- Wagg, Donald Arthur — 214
- White, Cecile Charles — 404
- DENTAL PRACTICE
- McIntosh, W. G. — Responsibility the key word in coping with society's new challenges — 65
- DENTISTRY
- IN CANADA
- Donaldson, D. — Canadian Guidelines for the teaching of pain and apprehension control in dentistry — 532
- McIntosh, W. G. — Responsibility the key word in coping with society's new challenges — 65
- IN ONTARIO
- Lewis, D. W., Magid, S. C. and Jarrett, M. E. — The Waterloo preschool children's denticare study — 27

INTERNATIONAL RELATIONSHIPS

McIntosh, W. G. — A dental convention with a difference — Opportunity or responsibility? (editorial) — 392

PRACTICE

King, D. R. and King, A. C. — Use of the vitalometer with rubber gloves — 182

PREVENTIVE

Turnbull, R. S. — Preventive dentistry: its role in periodontal disease (Editorial) — 100

SOCIALIZED

Lewis, D. W., Magid, S. C. and Jarrett, M. E. — The Waterloo preschool children's denticare study — 27

DENTISTS

CIVIL RESPONSIBILITY OF

McIntosh, W. G. — Responsibility the key word in coping with society's new challenges — 65

DENTURES

IMMEDIATE

Chaney, S. A. — Immediate denture impression technique using zinc-oxide and eugenol and rubber base impression material — 130

DESAUTELS, P. C. and BAROLET, R. Y. — CDA Council for Dental Materials and Devices: Status Report: High copper amalgams — 437

DIAGNOSIS

ORAL

Trott, J. R. and Morrow, D. — Biopsies: clinical and laboratory considerations — 492

ORTHODONTIC

Popovich, F., Thompson, G. W. and Main, P. A. — Persisting maxillary diastema: differential diagnosis and treatment — 330

DIASTEMA

Popovich, F., Thompson, G. W. and Main, P. A. — Persisting maxillary diastema: differential diagnosis and treatment — 330

DICKINSON, J. B., HUNTER, H. A., TEN CATE, A. R., and THOMPSON, G. W. — See Ten Cate

DONALDSON, D. — Canadian Guidelines for the teaching of pain and apprehension control in dentistry — 532

DRY SOCKET

Rozanis, J., Schofield, I. D. F. and Warren, B. A. — Is dry socket preventable? — 233

DUNN, WESLEY J. — "Since what we choose is what we are. . . ." — 473

DUNN, WESLEY J. — "L'objet de notre choix: ce que nous sommes. . . ." — 474

E

ECONOMICS

DENTAL

Lewis, D. W., Magid, S. C. and Jarrett, M. E. — the Waterloo preschool children's denticare study — 27

EDITORIALS

Cripton, M. J. — New Year's message from the President — 8
Cripton, M. J. — Pour la nouvelle année: un message du président — 50

McIntosh, W. G. — A dental convention with a difference — Opportunity or responsibility? — 392

McIntosh, W. G. — Do you need a reminder? October is once again CFDE month! — 468

McIntosh, W. G. — A titre de rappel! Encore une fois, octobre, le mois du FCED! — 471

Ruprecht, A. and Reid, J. A. — Radiographs and third-party carriers — 256

Turnbull, R. S. — Preventive dentistry: its role in periodontal disease — 100

EDUCATION, DENTAL

Donaldson, D. — Canadian Guidelines for the teaching of pain and apprehension control in dentistry — 532

Dunn, W. J. — "Since what we choose is what we are. . . ." — 473

Levine, N. and Hargreaves, J. A. — Education as a means to prevent dental problems to the handicapped — 185

McIntosh, W. G. — Do you need a reminder? October is once again CFDE month! — 468

RESEARCH

Beagrie, G. S. — Why research? — 320

EDUCATION OF PUBLIC

Turnbull, R. S. — Preventive dentistry: Its role in periodontal disease (Editorial) — 100

ENDODONTICS

CDA Council for Dental Materials and Devices: Status Report —

Root canal sealing materials — 538

ENSEIGNEMENT DENTAIRE

Dunn, W. J. — "L'objet de notre choix: ce que nous sommes. . . ." — 474

McIntosh, W. G. — A titre de rappel! Encore une fois, octobre, le mois de FCED — 471

Simard, P. — Consequences de la politique gouvernementale sur les curriculums des facultés dentaires — 430

EUGENOL

Chaney, S. A. — Immediate denture impression technique using zinc-oxide and eugenol and rubber base impression material — 130

EXERCICE DENTAIRE

LA THÉRAPIE MYOFONCTIONNELLE

Gaucher, H. — La thérapie myofonctionnelle — 568

EXTRACTION

DRY SOCKET

Rozanis, J., Schofield, I. D. F. and Warren, B. A. — Is dry socket preventable? — 233

IMPACTED TEETH

Raley, L., Chapnick, P. and Baker, G. — The impacted third molar — 364

F

FEDERATION DENTAIRE INTERNATIONALE

McIntosh, W. G. — A dental convention with a difference — Opportunity or responsibility? (Editorial) — 392

FIBROMA

Trott, J. R., Walton, P. and Baker, C. — A monostotic fibro-osseous lesion of the mandible — 132

FLUORIDES

IN WATER SUPPLIES

Bellemare, Michel — La fluoruration de l'eau — 520

FORENSIC DENTISTRY

Ten Cate, A. R., Thompson, G. W., Dickinson, J. B. and Hunter, H. A. — The estimation of age of skeletal remains from the colour of roots of teeth — 83

FRIEDLANDER, A. A. — Removal of an antral dentigerous cyst via a modified Caldwell-Luc: Report of a case — 179

G

GALIL, K. A. — An *in vitro* assessment of oral prophylaxis procedures. A scanning electron microscopy study — 370

GAUCHER, H. — La therapie myofonctionnelle — 568

GERMICIDES

Beagrie, G. S. and Brännström, M. — Pulpal response to cavity treatment with microbicidal solution and silicate restorations in monkeys — 239

GINGIVITIS

Johnson, R. H., Rozanis, J., Schofield, I. D. F. and Haq, M. S. — A comparison of clinical and photographic assessment of plaque and gingivitis — 576

GRANULOMAS AND GRANULOMATOUS AREAS

Schofield, I. D. F. and Holmes, H. — An aggressive central giant cell granuloma of the maxilla: Report of a case — 440

Trott, J. R., Walton, P. and Baker, C. — A monostotic fibro-osseous lesion of the mandible — 132

H

HANDICAPPED

DENTISTRY FOR

Levine, N. and Hargreaves, J. A. — Education as a means to prevent dental problems for the handicapped — 185

HAQ, M. S., JOHNSON, R. H., ROZANIS, J. and SCHOFIELD, I. D. F. See Johnson

HARGREAVES, J. A. and LEVINE, N. — See Levine

HARPER, R. and SMYLSKI, P. T. — Occlusal adjustment in orthognathic surgery: the team approach — 124

HOLMES, H. and SCHOFIELD, I. D. F. — See Schofield

HUNTER, H. A., TEN CATE, A. R., THOMPSON, G. W. and DICKINSON, J. B. — See Ten Cate

I

IDENTIFICATION BY MEANS OF TEETH

Ten Cate, A. R., Thompson, G. W., Dickinson, J. B. and Hunter, H. A. — The estimation of age of skeletal remains from the colour of roots of teeth — 83

IMMEDIATE DENTURES

Chaney, S. A. — Immediate denture impression technique using zinc-oxide and eugenol and rubber base impression material — 130

IMPACTED TEETH

Raley, L., Chapnick, P. and Baker, G. — The impacted third molar — 364

IMPRESSIONS

MATERIALS

Chaney, S. A. — Immediate denture impression technique using zinc-oxide and eugenol and rubber base impression material — 130

TECHNIQUES

Chaney, S. A. — Immediate denture impression technique using zinc-oxide and eugenol and rubber base impression material — 130

INCOME TAX

Federal Income Tax Returns by dentists — 68

INTERNATIONAL DENTAL CONGRESS

McIntosh, W. G. — A dental convention with a difference — Opportunity or responsibility? (Editorial) — 392

INTERNATIONAL RELATIONSHIPS

McIntosh, W. G. — A dental convention with a difference — Opportunity or responsibility? (Editorial) — 392

J

JARRETT, M. E., LEWIS, D. W. and MAGID, S. C. — See Lewis, D. W.

JAWS

DEVELOPMENT

Popovich, F., Thompson, G. W. and Main, P. A. — Persisting maxillary diastema: differential diagnosis and treatment — 330

JOHNSON, R. H., ROZANIS, J., SCHOFIELD, I. D. F. and HAQ, M. S. — A comparison of clinical and photographic assessment of plaque and gingivitis — 576

JOINT TEMPORO MANDIBULAR

PATHOLOGIE

Morency, R. — Pathologie de l'articulation temporo mandibulaire — 326

K

KING, A. C. and KING, D. R. — See King, D. R.

KING, D. R. and KING, A. C. — Use of the vitalometer with rubber gloves — 182

KOGON, S. L., STEPHENS, R. G., REID, J. A. and RUPRECHT, A. — See Stephens

L

LESIONS OF MOUTH

Trott, J. R., Walton, P. and Baker, C. — A monostotic fibro-osseous lesion of the mandible — 132

LEVINE, N. and HARGREAVES, J. A. — Education as a means to prevent dental problems for the handicapped — 185

LEWIS, D. W., MAGID, S. C. and JARRETT, M. E. — The Waterloo preschool children's denticare study — 27

M

MAGID, S. C., LEWIS, D. W. and JARRETT, M. E. — See Lewis, D. W.

MAIN, P. A., POPOVICH, F. and THOMPSON, G. W. — See Popovich

MANDIBLE AND MAXILLA

Harper, R. and Smylski, P. T. — Occlusal adjustment in orthognathic surgery: the team approach — 124

Trott, J. R., Walton, P. and Baker, C. — A monostotic fibro-osseous lesion of the mandible — 132

MANG, B. L. and RUPRECHT, A. — See Ruprecht

MATERIA MEDICA AND THERAPEUTICS

Chaney, S. A. — Immediate denture impression technique using zinc-oxide and eugenol and rubber base impression material — 130

MATERIALS, DENTAL

Chaney, S. A. — Immediate denture impression technique using zinc-oxide and eugenol and rubber base impression material — 130

CDA Council for Dental Materials and Devices: Status Report — Root canal sealing materials — 538

MAXILLA

Popovich, F., Thompson, G. W. and Main, P. A. — Persisting maxillary diastema: differential

diagnosis and treatment — 330
Schofield, I.D.F. and Holmes, H.
— An aggressive central giant cell
granuloma of the maxilla: Report
of a case — 440

McCOMB, D. — CDA Council for
Dental Materials and Devices:
Status Report: Root canal sealing
materials — 538

McINTOSH, W. G. — A dental con-
vention with a difference — op-
portunity or responsibility?
(Editorial) — 392

McINTOSH, W. G. — Do you need a
reminder? October is once again
CFDE month! (Editorial) — 468

McINTOSH, W. G. — A titre de
rappel! Encore une fois, octobre,
le mois du FCED! (Editoriale) —
471

McINTOSH, W. G. — Responsibility
the key word in coping with
society's new challenges — 65

MEMORIAM, IN

Allen, Ernest Fraser — 173

Husband, Clarence D. — 356

McCutcheon, James — 57

METRICK, L. — A direct technique
for post-core castings — 329

MOLARS

THIRD

Raley, L., Chapnick, P. and
Baker, G. — The impacted third
molar — 364

MORENCY, R. — Pathologie de
l'articulation temporo man-
dibulaire — 326

MORROW, D. and TROTT, J. R. —
See Trott

MOUTH

DISEASES

Brooke, R. I. and Seganski, D. P.
— Aetiology and investigation of
the sore mouth — 504

LESIONS

Trott, J. R., Walton, P. and
Baker, C. — A monostotic
fibro-osseous lesion of the mandi-
ble — 132

O

OCCLUSION

RESTORATION TO NORMAL

Harper, R. and Smylski, P. T. —
Occlusal adjustment in ortho-
gnathic surgery: the team ap-
proach — 124

OLIGODONTIA

Ruprecht, A. and Wright, G. Z.
— Ankylosis with and without
oligodontia: Report of seven cases
— 444

ORAL HYGIENE

Galil, K. A. — An *in vitro*
assessment of oral prophylaxis
procedures. A scanning electron
microscopic study — 370

ORAL SURGERY

Friedlander, A. A. — Removal of
an antral dentigerous cyst via a
modified Caldwell-Luc: Report of
a case — 179

AS ADJUNCT IN ORTHODON- TIC TREATMENT

Harper, R. and Smylski, P. T. —
Occlusal adjustment in orthog-
nathic surgery: the team approach
— 124

ORTHODONTIC DIAGNOSIS AND MEASUREMENTS

Popovich, F., Thompson, G. W.
and Main, P. A. — Persisting
maxillary diastema: differential
diagnosis and treatment — 330

ORTHODONTIC TREATMENT

DIASTEMA

Popovich, F., Thompson, G. W.
and Main, P. A. — Persisting
maxillary diastema: differential
diagnosis and treatment — 330

IMPACTED TEETH

Raley, L., Chapnick, P. and
Baker, G. — The impacted third
molar — 364

SURGERY AS ADJUNCT

Harper, R. and Smylski, P. T. —
Occlusal adjustment in orthog-
nathic surgery: the team approach
— 124

OSTEOARTHRITIS

Brooke, R. I. — Secondary osteo-
arthrosis (osteoarthritis) of the
temporomandibular joint — 323

OSTEOTOMY

Harper, R. and Smylski, P. T. —
Occlusal adjustment in ortho-
gnathic surgery: the team ap-
proach — 124

P

PAIN

DIAGNOSIS

Wallace, J. R. — Trigeminal
neuropathy — 367

CONTROL

Wallace, J. R. — Trigeminal
neuropathy — 367

PATHOLOGY

ORAL

Smith, M. J. A. and Bunyan, P.
— The verruciform Xanthoma:
Report of a case — 573

PERIODONTAL DISEASE

Turnbull, R. S. — Preventive den-
tistry: Its role in periodontal dis-
ease (Editorial) — 100

PERIODONTAL DRESSINGS

PHYSICAL PROPERTIES OF

CDA Council for Dental Materials
and Devices: Status Report: perio-
dental dressings — 501

PHOTOGRAPHY

Charter, D. — Canadian dentist
honored by American Photo-
graphic Society — 20

PLAQUES, DENTAL

Johnson, R. H., Rozanis, J.,
Schofield, I. D. F. and Haq, M. S.
— A comparison of clinical and
photographic assessment of
plaque and gingivitis — 576

POPOVICH, F., THOMPSON, G. W.
and MAIN, P. A. — Persisting
maxillary diastema: differential
diagnosis and treatment — 330

PRACTICE, DENTAL

King, D. R. and King, A. C. —
Use of the vitalometer with rubber
gloves — 182

PREVENTIVE DENTISTRY

Turnbull, R. S. — Preventive den-
tistry: Its role in periodontal dis-
ease (Editorial) — 100

PROPHYLAXIS

Gail, K. A. — An *in vitro*
assessment of oral prophylaxis
procedures. A scanning micro-
scopy study — 370

R

RALEY, L., CHAPNICK, P. and
BAKER, G. — The impacted
third molar — 364

REID, J. A. and RUPRECHT, A. —
See Ruprecht

REID, J. A., RUPRECHT, A., STE-
PHENS, R. G. and KOGON,
S. L. — See Stephens

REID, J. A. and STEPHENS, R. G. —
Paralleling radiographic tech-
nique without the long cone —
289

RESEARCH

DENTAL

Beagrie, G. S. — Why research?
— 320

RESORPTION

TEETH

Ruprecht, A. and Mang, B. L. —
Rapidly progressing internal
resorption — 536

RICHARDSON, A. S. — Caries under
an occlusal sealant — 188

ROENTGENOGRAMS

Reid, J. A. and Stephens, R. G.

— Paralleling radiographic technique without the long cone — 289

Ruprecht, A. and Reid, J. A. — Duplication of radiographs: Simple methods to be used in the dental office — 278

Stephens, R. G., Kogon, S. L., Reid, J. A. and Ruprecht, A. — A comparison of Panorex and intraoral surveys for routine dental radiography — 281

OWNERSHIP

Ruprecht, A. and Reid, J. A. — Radiographs and third-party carriers (Editorial) — 256

ROENTGENOLOGY

Ruprecht, A. and Reid, J. A. — Radiographs and third-party carriers (Editorial) — 256

IN ORAL DIAGNOSIS

Stephens, R. G., Kogon, S. L., Reid, J. A. and Ruprecht, A. — A comparison of Panorex and intraoral surveys for routine dental radiography — 281

DENTAL

Reid, J. A., and Stephens, R. G. — Paralleling radiographic technique with the long cone — 289

Ruprecht, A. and Reid, J. A. — Duplication of radiographs: Simple methods to be used in the dental office — 278

Stephens, R. G., Kogon, S. L., Reid, J. A. and Ruprecht, A. — A comparison of Panorex and intraoral surveys for routine dental radiography — 281

ROOT CANAL TREATMENT

FILLING MATERIALS

CDA Council for Dental Materials and Devices: Status Report: Root canal sealing materials — 538

ROZANIS, J., JOHNSON, R. H., SCHOFIELD, I. D. F. and HAQ, M. S. — See Johnson

ROZANIS, J., SCHOFIELD, I. D. F. and WARREN, B. A. — Is dry socket preventable? 233

RUPRECHT, A. and MANG, B. L. — Rapidly progressing internal resorption — 536

RUPRECHT, A. and REID, J. A. — Radiographs and third-party carriers (Editorial) — 256

RUPRECHT, A. and REID, J. A. — Duplication of radiographs: Simple methods to be used in the dental office — 278

RUPRECHT, A., STEPHENS, R. G.,

KOGON, S. L. and REID, J. A.

— See Stephens

RUPRECHT, A. and WRIGHT, G. Z.

— Ankylosis with and without oligodontia: Report of seven cases — 444

S

SCHOFIELD, I. D. F. and HOLMES, H. — An aggressive central giant cell granuloma of the maxilla: Report of a case — 440

SCHOFIELD, I. D. F., JOHNSON, R. H., ROZANIS, J. and HAQ, M. S. — See Johnson

SCHOFIELD, I. D. F., WARREN, B. A. and ROZANIS, J. — See Rozanis

SEGANSKI, D. P. and BROOKE, R. I. — See Brooke

SILICATES

Beagrie, G. S. and Brännström, M. — Pulpal response to cavity treatment with microbicidal solution and silicate restorations in monkeys — 239

SIMARD, P. — Consequences de la politique gouvernementale sur les curriculums des facultés dentaires — 430

SMITH, M. J. A. and BUNYAN, P. — The verruciform Xanthoma: Report of a case — 573

SMYLSKI, P. T. and HARPER, R. — See Harper

SPECIAL FEATURES

Charter, D. — Canadian dentist honored by American Photographic Society — 20

Dunn, Wesley J. — "Since what we choose is what we are . . ." — 473

Dunn, Wesley J. — "L'objet de notre choix: ce que nous sommes . . ." — 474

Federal income tax returns by dentists — 68

McIntosh, W. G. — Responsibility the key word in coping with society's new challenges — 65

Report on Dental Students' Conference — 115

STAINS AND PLAQUES ON TEETH

Johnson, R. H., Rozanis, J., Schofield, I. D. F. and Haq, M. S.

— A comparison of clinical and photographic assessment of plaque and gingivitis — 576

STEPHENS, R. G., KOGON, S. L., REID, J. A. and RUPRECHT, A.

— A comparison of Panorex and intraoral surveys for routine dental radiography — 281

STEPHENS, R. G. and REID, J. A. — See Reid

STERILIZATION OF CAVITIES

Beagrie, G. S. and Brännström, M. — Pulpal response to cavity treatment with microbicidal solution and silicate restorations in monkeys — 239

STERILIZATION AND ASEPSIS

Beagrie, G. S. and Brännström, M. — Pulpal response to cavity treatment with microbicidal solution and silicate restorations in monkeys — 239

T

TEETH

ANKYLOSIS

Ruprecht, A. and Wright, G. Z. — Ankylosis with and without oligodontia: Report of seven cases — 444

IDENTIFICATION BY MEANS OF

Ten Cate, A. R., Thompson, G. W., Dickinson, J. B., and Hunter, H. A. — The estimation of age of skeletal remains from the colour of roots of teeth — 83

IMPACTED

Raley, L., Chapnick, P. and Baker, G. — The impacted third molar — 364

MOLARS, THIRD

Raley, L., Chapnick, P. and Baker, G. — The impacted third molar — 364

RESORPTION

Ruprecht, A. and Mang, B. L. — Rapidly progressing internal resorption — 536

UNERUPTED

Raley, L., Chapnick, P. and Baker, G. — The impacted third molar — 364

TEMPOROMANDIBULAR JOINT DISEASES AND DYSFUNCTIONS

Brooke, R. I. — Secondary osteoarthritis (osteoarthritis) of the temporomandibular joint — 323

TEN CATE, A. R., THOMPSON, G. W., DICKINSON, J. B. and HUNTER, H. A. — The estimation of age of skeletal remains from the colour of roots of teeth — 83

TETERUCK, L. — The Canadian

Dental Aptitude Test — 225

THERAPEUTICS

DENTAL

Chaney, S. A. — Immediate denture impression technique using zinc-oxide and eugenol and rubber base impression material — 130

THIRD MOLARS

Raley, L., Chapnick, P. and Baker, G. — The impacted third molar — 364

THOMPSON, G. W., DICKINSON, J. B., HUNTER, H. A. and TEN CATE, A. R. — See Ten Cate

THOMPSON, G. W., MAIN, P. A. and POPOVICH, F. — See Popovich

TRIGEMINAL NEUROPATHY

Wallace, J. R. — Trigeminal neuropathy — 367

TROTT, J. R. and MORROW, D. — Biopsies: clinical and laboratory considerations — 492

TROTT, J. R., WALTON, P. and BAKER, C. — A monostotic fibro-osseous lesion of the mandible — 132

TURNBULL, ROBERT S. — Preventive dentistry: its role in periodontal disease (Editorial) — 100

W

WALLACE, J. R. — Trigeminal neuropathy — 367

WALTON, P., BAKER, C. and TROTT, J. R. — See Trott

WARREN, B. A., ROZANIS, J. and SCHOFIELD, I. D. F. — See Rozanis

WAXES AND WAX PATTERNS

Metrick, L. — A direct technique for post-core castings — 329

WISDOM TEETH

Raley, L., Chapnick, P. and Baker, G. — The impacted third molar — 364

WRIGHT, G. Z. and RUPRECHT, A. — See Ruprecht

X

X-RAY

DIAGNOSIS

Stephens, R. G., Kogon, S. L., Reid, J. A. and Ruprecht, A. — A comparison of Panorex and intra-oral surveys for routine dental radiography — 281

FILM

Stephens, R. G., Kogon, S. L., Reid, J. A. and Ruprecht, A. — A comparison of Panorex and intra-oral surveys for routine dental

radiography — 281

Ruprecht, A. and Reid, J. A. — Radiographs and third-party carriers — 256

Ruprecht, A. and Reid, J. A. — Duplication of radiographs: Simple methods to be used in the dental office — 278

TECHNIQUE

Reid, J. A. and Stephens, R. G. — Paralleling radiographic technique without the long cone — 289

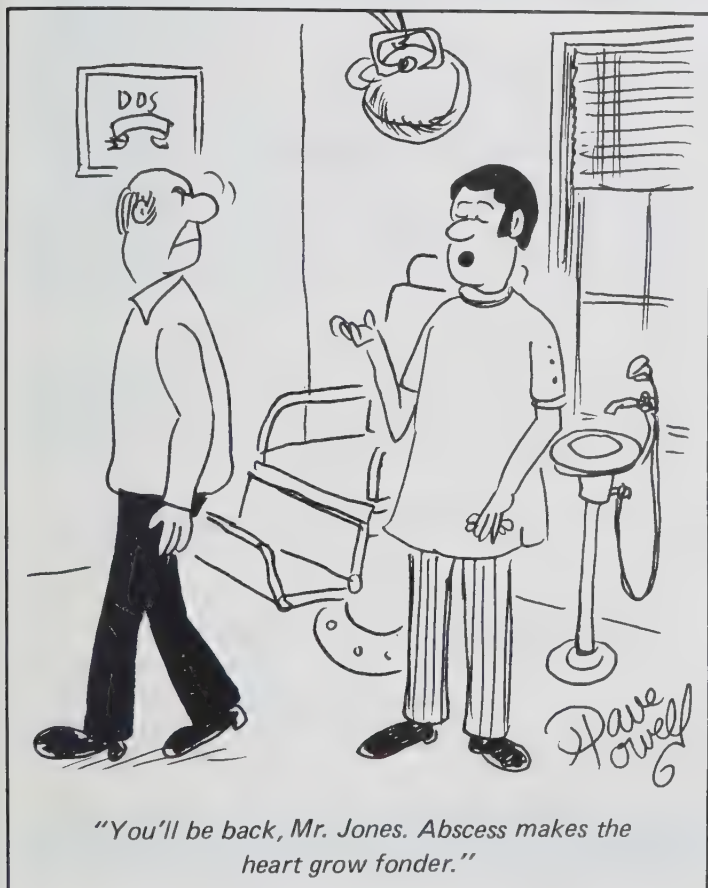
Ruprecht, A. and Reid, J. A. — Duplication of radiographs: Simple methods to be used in the dental office — 278

Stephens, R. G., Kogon, S. L., Reid, J. A. and Ruprecht, A. — A comparison of Panorex and intra-oral surveys for routine dental radiography — 281

Z

ZINC OXIDE

Chaney, S. A. — Immediate denture impression technique using zinc-oxide and eugenol and rubber base impression material — 130



**IMPACT,
RESPONSE,
RESULTS**
when you advertise in
The Journal of
The Canadian Dental
Association

PRIME EXPOSURE FOR
YOUR ADVERTISING

HIGHEST CIRCULATION
FIGURES IN CANADA

UNIQUE, WELL-PLANNED
EDITORIAL PROGRAM

EVERY ISSUE BILINGUAL

TOP QUALITY REPRODUCTION

COMPETITIVE RATES



Contact Business Manager
JOURNAL OF THE CANADIAN
DENTAL ASSOCIATION
1815 Alta Vista Drive, Ottawa
Ontario K1G 3Y6
Telephone: (613) 523-1770

CLASSIFIED ADVERTISEMENTS

REMITTANCE MUST ACCOMPANY CLASSIFIED ADS.
FORMS CLOSE ON 1ST OF MONTH PRECEDING MONTH OF ISSUE.

Direct advertising copy to:
Marie Cosgrave, Classified Advertising Manager,
Canadian Dental Association,
1815 Alta Vista Drive, Ottawa, Ontario K1G 3Y6.
Telephone: (613) 523-1770.

CLASSIFIED ADVERTISING RATES

(Per Insertion Per Issue):

Minimum (50 words or less)	\$15.00
Each additional word	.30
Service charge for C.D.A. Box No.	2.00

DISPLAY CLASSIFIED ADVERTISING RATES:

Available on request.

Replies to C.D.A. Box numbers should be addressed as follows:

C.D.A. Box
Advertising Department,
Canadian Dental Association,
1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

Box numbers must appear on envelope. Names of box number advertisers cannot be revealed.

Although the Canadian Dental Association believes that the classified advertisements which appear in these columns are from reputable sources, the Canadian Dental Association neither investigates the offers being made nor assumes any responsibility concerning them.

OFFICES AND PRACTICES

BRITISH COLUMBIA — Abbotsford. Dental office for rent in modern professional building in Abbotsford, adjacent to hospital. Panoramic view. Apply: McCallum Terrace Holdings, 2151 McCallum Rd., Abbotsford, B.C. V2S 3N8

BRITISH COLUMBIA — Vancouver. For Sale. Excellent location. Broadway - Grandville. High income. Three operatories, preventive-oriented practice. Modern equipment. Occupied now by two dentists going back to study. Reply to CDA Box Number 1752.

BRITISH COLUMBIA — Vancouver (Central). Booming practice for sale. Modern equipment and busy location. High gross. Requires two dentists. Resident dentists retiring and going into further education respectively. Please reply to CDA Box Number 1744.

BRITISH COLUMBIA — Vancouver Island. Lantzville, 10 miles north of Nanaimo. New plaza, up to 2000 square feet at \$5.25 Net Net Net. Other tenants include Pharmacy, Accountant, Coffee Shop, Deli, Beauty Parlor, Wool Shop, Plant Shop, Credit Union and Offices. Phone: D. Barlow, 753-4166.

BRITISH COLUMBIA — Victoria. For Sale. Two operator practice in downtown Victoria, with emphasis on relaxed and enjoyable conditions for both patients and staff. Good gross on cash basis. Reply to CDA Box Number 1736.

ALBERTA — Edmonton. Well established practice for sale. Prime location downtown. Modern air-conditioned office building. Rapid transit station in basement. For full particulars contact: Dr. T. O. Walhovd, 510 Empire Building, Edmonton, Alta. Phone: (403) 422-2783.

SASKATCHEWAN — Lloydminster. Recently vacated upstairs dental office available for rent. Last occupant there for eleven years, has moved to own building on Alberta side of city. Building situated in downtown area between two banks, and directly across from large co-op centre. Space also available for another dentist and lab technician if required. Contact: S. W. Holt, 11024 - 83 Avenue, Delta, B.C. V4C 2G2. Phone: 596-9274.

SASKATCHEWAN — Saskatoon. Family practice for sale in Saskatoon's most centrally located professional building. Very moderately priced. Terms can be arranged. All equipment etc. included. Immediate take-over or after a couple of months. Contemplated retirement and health reasons for selling. Contact: Dr. B. J. Wall, 510 Canada Building, Saskatoon, Sask. S7K 0B3. Phone: 244-7606.

MANITOBA — Steinbach. Dental building with eight operatories. Presently one dentist owner with two associates. Patient load sufficient for one more associate. Modern equipment. All the benefits of a rural town but 45 minutes from Winnipeg. Owner willing to associate for short term, if necessary. Contact: Dr. Koephe, Box 2708, Steinbach, Manitoba R0A 2A0.

ONTARIO — Cannington. Golden opportunity awaits any dentist setting up practice in Cannington, 70 miles north-east of Toronto. Rapidly developing small town of 1,500. Local hospital privileges. New medical centre with spacious fully serviced dental suite. Present part-time dentist leaving to concentrate on his city practice but might sell some equipment. Apply: Box 370, Cannington, Ont. L0E 1E0. Phone: (705) 432-2569.

ONTARIO — London. Associate or sale of three operator practice. Established two years. In modern clinic. Reply to CDA Box Number 1753.

ONTARIO — Oshawa. Periodontist desperately required in high insurance area. To lease space in modern Medical Centre or possible associateship. Preferably full-time. Call: Dr. Peter Zakarow at (416) 576-3740, or reply to 172 King St. E., Oshawa, Ont.

ONTARIO — South-eastern. Successful dental practice in new medical dental building for sale. Twelve hundred square feet of comfortable working space. Consists of two main operatories of new Siemens equipment and newly equipped hygienist room. Spacious waiting and business area. Good size lab. Dark room and private office which could become fourth operator. Suitable for two dentists interested in partnership. Reply to CDA Box Number 1743.

ONTARIO — Thamesville. Office for lease in new medical centre in Thamesville, Ontario (55 miles south-west of London), situated in an under-served area, grants may be available. Reply to: L. Suffield, Box 190, Thamesville, Ontario, phone 692-3842 or 692-3850.

QUEBEC — Montreal. Practice for sale in downtown Montreal in brand-new office complex. Office space is shared with a partner. Personnel include part-time hygienist and associate. Equipment includes two Cox units with Dental-Eze chairs, General Electric Panelipse and Litton PR6 auto developer. Good traffic with high gross. Reply to CDA Box Number 1747.

QUEBEC — Montreal (Quartier ouest). Pratique generale et preventive etablie depuis quatre années. Quatre salles opératoires, deux entièrement équipées. Occasion unique pour un ou deux dentistes. Mille pieds carrés, laboratoire commercial voisin. Revenu brut annuel approchant cent mille dollars. Le propriétaire se spécialise. Casier A.D.C. no. 1709.

QUEBEC — Pointe Claire. Ideal opportunity, ready practice located at residence. Great savings — rent, etc., especially for recent graduate. Prime location, walking distance to schools, shopping centre. Ample parking. Neighbouring pediatrician. Office beautifully equipped and pleasantly decorated. A must to see. Dentist leaving province. Reply to CDA Box Number 1750.

QUEBEC — Pointe Claire. Occasion idéale, pratique établie à même la résidence. Aubaine avantageuse, épargne assurée, etc., spécialement pour jeune gradué. Endroit central, courte distance des écoles et centres d'achats. Ample stationnement. Voisin d'un pédiatre. Bureau équipé au complet et décoré superbement, quelque chose à voir. Le dentiste quitte la province. Répondez à Boîte #1750 de l'ADC.

ASSOCIATESHIP AVAILABLE

BRITISH COLUMBIA — Kamloops. Associate wanted for prevention oriented practice. Three operatories, full time hygienist. Please call (604) 554-1954 or write: Dr. D.B. Dextraze, 21 - 750 Fortune Drive, Kamloops, British Columbia V2B 2L2.

BRITISH COLUMBIA — Kamloops. Preventive oriented, humanistic practice requires an associate. Modern custom built practice. Please write to or telephone: Dr. Jim Horton, Cedar Dental Centre, 3122 Westsyde Road, Kamloops, B.C. Phone: (604) 579-8833 or 579-8727.

BRITISH COLUMBIA — Richmond. Full time associate required for modern, preventive oriented family practice in this Vancouver suburb. Excellent opportunity for the right person to practise all phases of general dentistry in an enjoyable atmosphere. A practice-sharing option will be considered if philosophies are compatible. Preference given to experienced persons. Please reply to CDA Box Number 1745.

BRITISH COLUMBIA — Vancouver. Associate wanted for a downtown office, preferably a dentist with a minimum of two years' experience. Long term possibilities. Reply to CDA Box Number 1742.

BRITISH COLUMBIA — Vancouver. Full time associate required in a four dentist office. Modern equipment throughout. Local and general anaesthetic services offered to the patient. Modern air-conditioned offices on the ground floor in an active business centre of Burnaby. Reply to CDA Box Number 1741.

BRITISH COLUMBIA — Victoria. Young, associate dentist required. Four-chair modern operatories. Strictly medical-dental building (opposite Jubilee General Hospital). General anaesthesia privileges. Family-oriented practice. No capital outlay. Reply: Dr. B. Rauch, #310 - 1900 Richmond Ave., Victoria, B.C. V8R 4R2.

BRITISH COLUMBIA — Victoria. Full time dentist required for individual practice and perhaps partnership or outright purchase. Capital outlay required. Long and well established practice in desirable location. Reply to CDA Box Number 1737.

ONTARIO — Gore Bay. Associate wanted for well established and extremely busy modern dental office in pleasant rural community. Pollution free surroundings with many lakes and exceptional scenery — everything to offer for the outdoor enthusiast, and only five hours' drive from Toronto. Hospital affiliation is available, excellent opportunity to practise comprehensive preventive dentistry. Reply to CDA Box Number 1701.

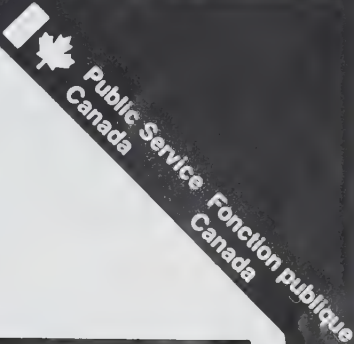
ONTARIO — Oshawa. Associate needed. Modern efficient office in high insurance area. Well established group practice — three dentists and expanded duty auxiliaries. One present associate leaving for Toronto. Call: Dr. Peter Zakarow at (416) 576-3740, or reply to 172 King St. E., Oshawa, Ont.

ONTARIO — Toronto. Associate, full- or part-time required for modern preventive oriented practice in downtown Toronto. Enthusiastic dentist willing to work in all aspects of general practice preferred. Four, 4-handed operatories fully equipped. Reply to CDA Box Number 1728.



Open to both
men and women

Appel
de candidatures
mixtes



REGIONAL DENTAL OFFICER

Health and Welfare Canada
Edmonton, Alberta

Salary: \$29,841 — \$37,128
Ref. No: 77-E-848 ()

Duties

The successful candidate will plan, organize, administer and evaluate the dental treatment and health education activities for eligible Alberta Indians; and functionally direct the activities of the dental and para-dental staff engaged in the provisions of the program.

Qualifications

Graduation from a recognized school of dentistry and experience in planning and administering a complete dental program is required. Knowledge of English is essential.

How to Apply

Send application form and/or résumé to:

Public Service Commission of Canada
300 Confederation Building
Edmonton, Alberta T5J 1Y6
Closing Date: January 15, 1978

Please quote the applicable reference number at all times.

DENTISTE RÉGIONAL

Santé et Bien-être social Canada
Edmonton (Alberta)

Traitement : \$29 841 à \$37 128
No de référence : 77-E-848 ()

Fonctions

Le titulaire élabore, organise, gère et évalue les programmes de soins dentaires et d'hygiène buccale à l'intention des autochtones de l'Alberta qui sont admissibles; dirige le travail du personnel chargé d'administrer les soins dentaires et para-dentaires.

Conditions de candidature

Être diplômé d'une école dentaire. Avoir su s'acquitter de tâches relatives à l'élaboration et l'administration d'un programme intégral de soins dentaires. La connaissance de l'anglais est indispensable.

Comment se porter candidat

Envoyez votre demande d'emploi ou votre curriculum vitae à :

Commission de la fonction publique du Canada
300 — Edifice Confédération
Edmonton (Alberta) T5J 1Y6
Date limite : le 15 janvier 1978

Prière de toujours rappeler le numéro de référence approprié.

OPPORTUNITIES AVAILABLE

ALBERTA — Cold Lake. A dentist is required for the Town of Cold Lake, 180 miles north-east of Edmonton, in the Lakeland district of North-eastern Alberta. Cold Lake is a pleasant town situated on the shore of Cold Lake, a lake approximately 20 miles across which extends into North-western Saskatchewan. It offers good boating facilities in summer. A new Provincial Park adjoining the town has recently been opened. There is excellent all season fishing on Cold Lake and other recreational facilities. There is a large drawing area and rapid growth of the town is expected due to the development of the Tar Sands. There are two Medical Doctors resident in the town and a hospital. There are two schools — Separate and Public. Office space will be available in a new Mall. Interested parties may write for further details to: P.O. Box 250, Cold Lake, Alberta T0A 0V0.

ALBERTA — Pincher Creek. Hygienist and certified intra-oral assistant needed immediately in modern three-dentist practice close to major city. Salary and benefits negotiable. All auxiliaries get a profit share. Please reply in writing to Box 820, Pincher Creek, Alberta T0K 1W0 or phone: (403) 627-3290.

SASKATCHEWAN — Saskatoon. Diagnosis and Oral Radiology, University of Saskatchewan, College of Dentistry. Subject to anticipated budget authorization, an additional full time faculty member will be required from July 1, 1978 in the Department of Diagnosis and Oral Radiology, College of Dentistry, University of Saskatchewan, Saskatoon, Canada. Applicants must be graduates of an accredited dental programme, should have advanced training in Oral Medicine/Diagnosis, and preferably be diplomates of the American Board of Oral Medicine or Oral Pathology, or a Fellow of the Royal College of Dentists of Canada. Academic rank and salary will be commensurate with qualifications and experience. Letters of application and curriculum vitae should be sent to: Dr. E. R. Ambrose, Dean, College of Dentistry, University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0.

SASKATCHEWAN — Saskatoon. Orthodontic Division — Pediatric Dentistry, University of Saskatchewan, College of Dentistry. Subject to anticipated budget authorization, an additional full-time faculty member will be required from July 1, 1978 in the Orthodontic Division of Pediatric Dentistry, College of Dentistry, University of Saskatchewan, Saskatoon, Canada. Applicants must be graduates of an accredited Orthodontic programme, and be eligible for specialist certification. Academic rank and salary will be commensurate with qualifications and experience. Letters of application and curriculum vitae should be sent to: Dr. E. R. Ambrose, Dean, College of Dentistry, University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0.

SASKATCHEWAN — Saskatoon. Pedodontic Division — Pediatric Dentistry, University of Saskatchewan, College of Dentistry. Subject to anticipated budget authorization, an additional full-time faculty member will be required from July 1, 1978 in the Pedodontic Division of Pediatric Dentistry, College of Dentistry, University of Saskatchewan, Canada. Applicants must be graduates of an accredited Pediatric Dentistry programme, and be eligible for specialist certification. Academic rank and salary will be commensurate with qualifications and experience. Letters of application and curriculum vitae should be sent to: Dr. E. R. Ambrose, Dean, College of Dentistry, University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0.

SASKATCHEWAN — Saskatoon. Prosthodontics, University of Saskatchewan, College of Dentistry. Subject to anticipated budget authorization, an additional full-time faculty member will be required from July 1, 1978 in the Department of Prosthodontics, University of Saskatchewan, Saskatoon, Canada. Applicants should be graduates of an accredited dental programme, should have postgraduate training in removable prosthodontics, and be eligible for specialist certification. Academic rank and salary will be commensurate with qualifications and experience. Letters of application and curriculum vitae should be sent to: Dr. E. R. Ambrose, Dean, College of Dentistry, University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0.

MANITOBA — Winnipeg. Oral Surgeon — specialist required for Winnipeg, Manitoba practice. Object partnership. Candidate must take Manitoba Dental Association examination. Submit curriculum vitae and recent photo to: CDA Box Number 1749.

MANITOBA — Winnipeg. The University of Manitoba Faculty of Dentistry invites applications and nominations for the position of Director of the School of Dental Hygiene, commencing July 1, 1978. Letters of application and curriculum vitae or nominations should be submitted before January 15, 1978, to: Dr. S. Borden, Acting Dean, University of Manitoba, Faculty of Dentistry, 780 Bannatyne Ave., Winnipeg, Manitoba R3E 0W3.

ONTARIO — Dental Underserved Areas. The Ontario Ministry of Health offers financial support for dentists to establish practices in designated underserved dental areas. Locations are available throughout Ontario. Incentive grants, payable over four years, are \$18,000 in Northern Ontario, and \$14,000 in Southern Ontario. Alternatively, a guarantee net professional income of \$28,000 per annum is offered in Northern Ontario. A limited number of salaried positions are open on mobile dental coaches. Apply to: Dental Officer, Program for Underserved Areas, 7 Overlea Blvd., Toronto, Ont. M4H 1A9. Phone: (416) 965-5036.

ONTARIO — Toronto. Oral Surgeon wanted for busy general practice in Toronto and vicinity. A knowledge of general anaesthesia essential. Send resume to CDA Box Number 1748.

OPPORTUNITIES WANTED

BRITISH COLUMBIA — Alberta. Associateship in Vancouver, Calgary or vicinity. Preventive oriented general practitioner with five years experience desires associateship beginning January 1978. Reply to CDA Box Number 1751.

ORAL SURGEON, aged 34, family, completing Board-approved residency June 1978 in New York. Extensive training in all phases of oral and maxillo-facial surgery and general anesthesia. Have passed C.D.N.E.B. Seeks association in Ottawa region, will consider other areas. Reply to CDA Box Number 1738.

PAEDODONTIST — Aged 28, married, completing two-year hospital residency (7/1/78). Excellent background in anaesthesia, handicapped patients, orthodontics. Private practice experience, passed N.D.E.B.'s. Desires associateship or purchasing of private practice in small community. Mountainous area preferred, but will consider any province. Contact: Dr. Gary Breen, 2171 South Commons Road, Reynoldsburg, Ohio 43068, U.S.A. or phone (614) 866-1391.

MEETINGS

CANADIAN ACADEMY OF PERIODONTOLOGY — Quebec Association of Periodontists, Annual Meeting May 26-28, Hotel L'Esterel (Laurentians) — Dr. Fermin Carranza. Information: Dr. M. Stutman, 4141 Sherbrooke St. W., Suite 535, Montreal, Quebec H3Z 1B8.

COURSES

SECOND ANNUAL ACUPUNCTURE CRUISE — Clinical Workshop at Sea. March 21-31, 1978. Ten day Seminar-Clinic aboard the Luxury Italian Liner, *Federico C.* to Venezuela, Columbia, Jamaica, Panama, Curacao and Aruba. Special tour rate includes accommodations and workshop for less than cost of accommodations alone; coupled with a health tour package for the general public. Instructor Dr. Ralph Alan Dale, Adj. Prof. (acupuncture), Physical Therapy program, Florida International University. Director, Acupuncture Education Centre. Write for professional and for the general public brochures to: Acupuncture Education Centre, P.O. Box 6622, Surfside, Fla. 33154, U.S.A. Phone: (305) 861-1162.

MISCELLANEOUS

DENTAL VACATIONS — Deep Powder Skiing by Helicopter and Dental Seminars. Continuing education credits recognized in California. Last winter when there was no snow elsewhere in the West, we had waist deep powder. Contact: Deep Powder, 18 Mary Walk, Elliot Lake, Ontario P5A 2A1.

WOODTURNING — Are you interested in woodturning as a hobby? Take a two day intensive course for beginners from a qualified teacher. Cut wood the way it prefers to be cut. For further information write to: Practical Woodturning, Post Office Box 171, Brampton, Ontario L6V 2L1.

EQUIPMENT

ONTARIO — Downsview. We carry a complete line of high quality dental, surgical, acupuncture instruments and materials from the People's Republic of China. Immediate and guaranteed delivery. For more information, please write: Pentraco Limited, 3883 Chesswood Drive, Downsview, Ontario, Canada M3J 2R8. Phone (416) 630-5284.

Chairman of Paedodontics THE UNIVERSITY OF BRITISH COLUMBIA

Applications are now being accepted for a combined 34-month graduate program leading to specialty certification in periodontics and an M.Sc. degree in Dental Science. A 24-month certificate program in periodontics is also available. Both programs are contingent upon accreditation and approval by the Council of Universities of British Columbia, and are planned to commence September 1978.

For further information please contact:

Dr. A. L. Ogilvie
Department of Oral Medicine
Faculty of Dentistry
The University of British Columbia
2075 Wesbrook Place
Vancouver, B.C., Canada V6T 1W5

FACULTY OF DENTISTRY UNIVERSITY OF MANITOBA

Course Supervisor in Hospital Dentistry

The Faculty of Dentistry is inviting applications for a full-time faculty position as supervisor of the undergraduate curriculum in Hospital Dentistry, effective July 1, 1978. Applicants should have hospital and teaching experience, as well as a dental qualification, registrable in Manitoba. The appointment carries a private practice privilege of ten half-days per month. Academic rank and salary are negotiable.

Applications along with curriculum vitae plus names and addresses of three references should be forwarded to:

Chairman, Hospital Dentistry Committee
Faculty of Dentistry
780 Bannatyne Avenue
Winnipeg, Manitoba, Canada R3E 0W3

Closing date for application is January 31, 1978, or until the position is filled.

DENTISTS

The Nova Scotia Department of Health invites applications from dentists licensed or eligible for licensure in Nova Scotia.

DUTIES:

To provide general dental services for children; to instruct children and adults in correct oral hygiene procedures and to participate in the dental health education of the Department in an assigned area.

SALARY RANGE:

\$21,396–\$30,158 per annum. (currently under review)

Part-time appointments will be considered where requested.

Full Civil Service benefits.

Competition is open to both men and women.

Please quote Competition Number 77-554.

Closing Date: December 24, 1977.

Application forms may be obtained from the Nova Scotia Civil Service Commission, P.O. Box 943, J. W. Johnston Building, Halifax, Nova Scotia, B3J 2V9, and from the Provincial Building, Sydney, Nova Scotia, B1P 2L1.

UNIVERSITY OF TORONTO FACULTY OF DENTISTRY

Chairman of Paedodontics

Applications are invited for the position of Chairman, Department of Paedodontics. Duties will include administration of departmental activities in undergraduate and postgraduate training, and involvement in teaching and research. The candidate should have a broad clinical and academic background. The appointment will be at a tenured senior level with salary according to qualifications and experience. Submit application with curriculum vitae and names of three referees by January 31, 1978 to:

Professor D. L. Anderson
Faculty of Dentistry
University of Toronto
124 Edward Street
Toronto, Canada
M5G 1G6

DENTIST

Applications are solicited for a dentist at Churchill for a joint appointment between the Churchill Health Centre and the University of Manitoba Faculty of Dentistry.

The C.H.C. is a community-governed centre newly housed in the Churchill Town Centre which provides public health and social services as well as medical and dental ambulatory and in-patient care to this northern Manitoba community and its outlying area. The University of Manitoba provides community experience at Churchill for undergraduate students in Dentistry and Dental Hygiene.

The staff of the Dental Clinic includes a dental hygienist, a receptionist and a chair-side assistant. The facilities include four operatories, two of which are fully and modernly equipped (Cox units 1975); a dental lab; x-ray including G.E. Periapical and Panelipse units and automatic developer.

The Clinic provides dental treatment services and clinical and preventive programs in the local schools.

Salary range starts at \$33,000.00 depending on experience and qualifications. The incumbent would also be an Assistant Professor in the Department of Preventative Dental Science. The term is for one year — renewable if mutually satisfactory.

Fringe benefits include substantially subsidized furnished housing, moving expenses, holiday travel and annual educational leave.

Applications in the form of a letter including a curriculum vitae and the names of at least two references, or enquiries to be addressed to:

Dr. Donald B. Proctor, Chairman, Rural and Urban Committee, Faculty of Dentistry, University of Manitoba, 780 Bannatyne Avenue, Winnipeg, Manitoba, R3E 0W3.

UNIVERSITY OF TORONTO FACULTY OF DENTISTRY

Applications are invited for a professorial position to head the teaching in Endodontics at the Faculty of Dentistry, University of Toronto. The candidate should have a broad clinical and academic background. Rank and salary will be according to qualifications and experience.

Letters of application and curricula vitae should be submitted immediately to:

**Professor D. B. McAdam
Faculty of Dentistry
University of Toronto
124 Edward Street
Toronto, Ontario
M5G 1G6**

Applications should be submitted prior to 15th February, 1978.

ADVERTISERS' INDEX

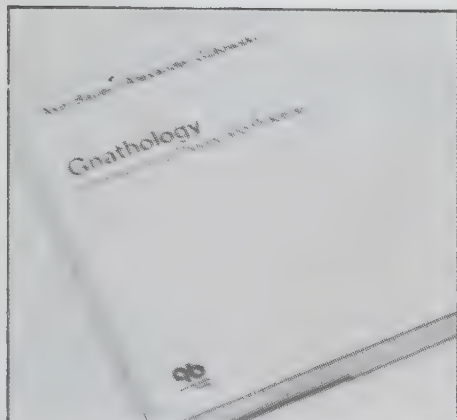
Ash Temple	IFC
L.D. Caulk Co. of Canada	561, 562
Colgate Palmolive Ltd.	553
Denco	567
Dentsply International	546, 559
Kodak Canada	581
Nobilium	555
Canadian Dental Association	582
Osta International	574
Pfingst	580
Procter and Gamble	545
Warner Lambert Canada Ltd.	OBC
Weil Dental	IBC
Whaledent	549
Wright Laboratories	551

Advertisers in the Journal of the Canadian Dental Association are accepted on the basis of the Association's Standards on Advertising. Product claims are based on adequate evidence acceptable to the Association and are in keeping with highest professional ethics.



"My husband is a dentist, and that's about how often I see him."

New Products



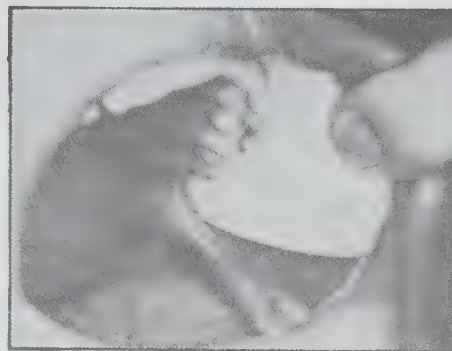
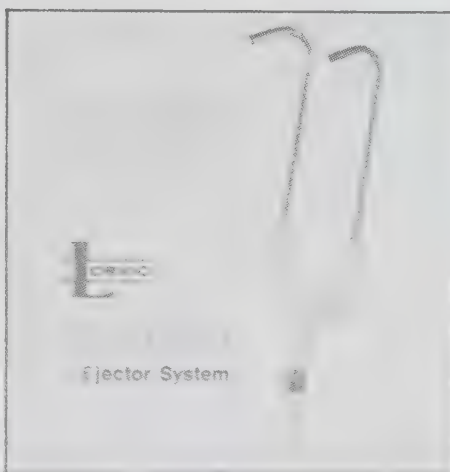
GNATHOLOGY

Introduction to Theory & Practice.
(Bauer / Gutowski)

The purpose of this book, with its 1,000 illustrations (many hundreds in colour), is to school the eye to recognize and overcome disturbances in the stomatognathic system early, before destruction requires great effort for correction. The requirement to be met in reaching this goal is that the dentist be ready in theory and practice to carry out charting, diagnosis, planning and treatment in an optimal manner. Available from WEIL ...

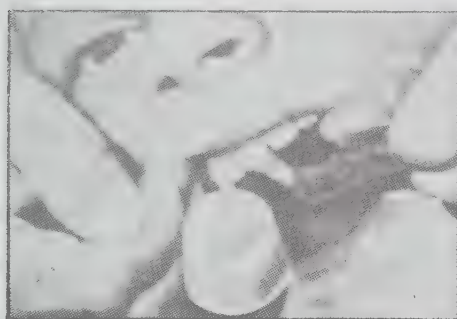
NEW SALIVA EJECTOR

Ideal for maximum aspiration and maximum patient comfort during wash-field techniques, ultrasonic scaling and other procedures requiring constant aspiration. The DUO-VAC can be used to evacuate from the buccal and lingual sides or from both lingual sides of the arch. The soft disposable vinyl sleeves will not suck the soft tissue. For use on the regular saliva ejector outlet or for the high-volume aspiration systems. Available in a kit of a pair with 100 sleeves from WEIL ...



DRI-AIDS in place of COTTON ROLLS

Ideal when cotton rolls are difficult to place, either buccally or lingually. DRI-AIDS are thin, allowing for ease of placement, greater visibility and easy access. DRI-AIDS protect and retract the buccal mucosa during mechanical preparations, especially during class II and class V cavity preparations of the upper 2nd and 3rd molars. They provide a dry field when working in the parotid duct area, maintain the sulcus depth and prevent the mucosa from touching the teeth. Use DRI-AIDS during preparation, impressions, placement of restorative materials and fluoride applications. Available in small or large, dispenser or bulk packages from WEIL ...



FLUORIDE TREATMENT IN ONE STEP

Geltainer is a wax-plastic, quickform, micro-fit disposable tray for topical fluoride applications of gel. Easily formed to custom-fit individual patients in seconds. A perfectly 'dead' material which has no spring and therefore will retain the fluoride as close to the teeth as if hand-pressed during the whole required time. Available in boxes of 40 either small or large. From WEIL ...



DISPOSABLE DAPPEN DISHES IN 5 COLOURS

Costs only pennies, saves time, labour and avoids cross contamination. Suitable for almost all materials used in dentistry. Ideal for prophylaxis paste, as the flip-up tab enables the dish to be kept between the fingers close to the mouth during prophylaxis. For the best rate buy in 1,000, either single colour or assorted. Also available in 100 or 500. From WEIL ...



NOW MICRO MEGA HANDPIECES for MICROMOTORS, Air or Electric

A complete selection of handpieces for speeds from 600-120,000 rpm ... for E fittings, Torquemaster or similar motors. Either 5.8:1 Reduction, 1:1 speed, 3:1 Multiplication, Giromatic, Amalgam Condenser, regular Contra-angle, Straight Handpiece prophylaxis heads, snap-on or screw-on are available from WEIL ...

 **WEIL**

DENTAL SUPPLIES LIMITED

18 Grenville Street, Tor., Ont. M4Y 1A4 (416) 925-5164

Next time you've got a gum chewer in your chair... hand out some good advice.

Give your patients Trident Sugarless Gum.

Many dentists recommend Trident Sugarless Gum to patients who chew gum. Trident is sugarless, so there's no risk of sugar damage to teeth. And because of Trident's long-lasting flavour, people enjoy chewing it. Trident can also be a worthwhile aid in your dental program for patients who chew gum. So the next time a patient asks about chewing gum, hand out Trident Sugarless Gum – a pack of flavour and good advice.



**For dentists who don't want
their patients to chew sugar
when they chew gum.**

THE TRIDENT PROFESSIONAL OFFER.

Please send me Trident's Professional Offer consisting of 2 boxes of each flavour: Spearmint, Peppermint, Fruit and Cinnamon. A total of 8 boxes (144 packages) for \$10.00 (regular value: \$28.80). (Ontario dentists include 70¢ Provincial Sales Tax.) Enclosed please find my cheque/money order in the amount of \$_____

Name _____

Address _____ 124 EDWARD ST.

City _____ TORONTO 2

Prov. _____ Postal Code _____

Send to: Trident, Box 2147, Toronto, Ontario M5W 1H1



7 DAYS

THIS BOOK MAY BE KEPT FOR
7 DAYS ONLY

IT CANNOT BE RENEWED

JUN 5 1979
AUG 2 1979
AUG 14 1979
OCT 31 1979
FEB 27 1980
OCT 16 1980
OCT 28 1980
JAN 19 1981
FEB 2 1981
MAR 2 - 1981
MAR 15 1982
MAR 22 1982
APR 30 1982
MAY 5 1982
DEC 3 1982
NOV 10 1982
OCT 19 2006
NOV 22 1983
DEC 12 1983
MAR 15 1984
SEP 30 1985
APR 9 1986
OCT 30 1987
DEC 17 1987
OCT 5 1988
SEP 15 1992
SEP 14 2000
OCT 14 2003
JUN 9 2008

RK
1
C37
v.4
1977
Den

Canadian Dental Association
Journal

1977

270A

TODAY'S DATE	
26 NOV-82	Paul G.
NOV 3/83	Brian G.
NOV 15/83	DOROTHY M.
Dec 5/83	Max Ouanan
Mar 8/83	C. Birk

Canadian Dental Association
v.43 1977

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY

